TWENTY-FOURTH
ANNUAL REPORT

EXTENSION SERVICE

UNIVERSITY OF MARYLAND

FOR THE YEAR 1938

COLLEGE PARK
MARYLAND

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H. C. BYRD	*President and Executive Officer*

Cooperative Extension Work in Agriculture and Home Economics, Extension Service, University of Maryland, and the United States Department of Agriculture Cooperating.

T. B. SYMONS, Director

(Distributed in furtherance of acts of Congress of May 8 and June 30, 1914)

LETTERS OF TRANSMITTAL

DR. H. C. BYRD,
President, University of Maryland:

I have the honor to present herewith the Twenty-Fourth Annual Report covering the work of the Extension Service of the University of Maryland, in cooperation with the U. S. Department of Agriculture, for the calendar year 1938, together with a financial report for the fiscal year ending June 30, 1938.

Respectfully submitted,

THOMAS B. SYMONS,
Director, Extension Service.

January 1, 1939.

TO HIS EXCELLENCY HERBERT R. O'CONOR,
Governor of Maryland:

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FOR THE YEAR 1938

By THOMAS B. SYMONS, Director

E. I. OSWALD and MISS VENIA M. KELLAR, Assistant Directors

INTRODUCTION

THE MOST significant development in Extension work in Maryland during the year 1938 has not consisted in launching new and decidedly different lines of work from those conducted in previous years, but rather in the progress made in coordinating and integrating the many programs being carried out, and thereby increasing their efficiency and effectiveness.

During the last few years a number of new programs were instituted, most of which required activities on the part of Extension workers of a very different character from those conducted in former years. Each of these so-called "action" programs was designed to serve a specific need, and all of them were super-imposed upon a highly diversified Extension program that had developed through the years. Naturally, there was lack of coordination and the need was evident for molding them into a broad program adapted to the needs of Maryland. Such coordination was highly essential, both from the standpoint of rendering greatest service and of utilizing efficiently the forces available. Special attention was given to ways and means whereby the various efforts could be focused on the most pressing needs of agriculture and rural people, and significant progress was made.

The season was a little better than average for production of most Maryland crops. Yields per acre and total production

were equal to or above the average of the last ten years in most cases, but lower prices resulted in a total value about $5,000,000 less than in 1937.

Extension Work Reaches the People

IT IS realized that figures express very inadequately the extent to which the activities of the Extension Service are reaching the people throughout the entire State and the numbers that are participating in them in one way or another. However, the reports of extension workers supply the only concrete evidence available and give, at least, a partial conception of the wide scope of the work.

A summary of these reports for the year 1938 shows that extension workers made 24,641 farm or home visits to 10,537 different farms or homes. Apparently there is a greater tendency to consult extension agents in their offices, either by personal calls or by telephone. The record shows 87,133 calls at offices and 61,856 telephone calls received by extension workers on matters pertaining to activities in progress, or for specific information. This is a considerable increase over the preceding year and is probably due in part to the so-called action programs that are being carried out. There was an increase also in the number of individual letters written, reaching a total of 70,730. In addition, there were 3,593 different circular letters written during the year. Bulletins had an important place as a means of furnishing information. Extension workers distributed 69,704 on subjects in which those receiving them were particularly interested.

That method demonstrations are still proving valuable as a means of conveying information is shown by the fact that 6,895 such demonstrations were given to 116,601 persons. A total of 2,814 persons visited result demonstrations and had the significance of the results explained to them. Aside from those mentioned, extension workers participated in one way or another in 5,638 other meetings of an extension character, attended by 350,843 persons.

The important part that local leaders have in extension activities has been emphasized many times and becomes an increasing factor in the extent of the work. Some indication of this influence is found in the fact that records for 1938 show that there were 3,186 meetings with attendance of

58,674 persons held by local leaders or committeemen and not participated in by agents or specialists.

Conservation

THE Extension program for the year was built to include conservation, in its broadest sense, as a primary objective. Through the programs conducted in cooperation with the AAA, the Soil Conservation Service, the Farm Security Administration, the REA, and other agencies, substantial progress was made during recent years. Much of the work, however, was of a foundation character and it was not until the present year that the real progress in conservation as a combined result of the several efforts became distinctly apparent. Particularly in the field of conservation by prevention and control of soil erosion was the progress outstanding. Farmers who a few years ago did not realize that they had erosion problems on their farms are demanding help in formulating and carrying out effective conservation programs. The first conservation district was formed under the new law enacted by the last Maryland Legislature, which provides a means by which the farmers in a given area may join together and cooperate in a program to conserve their soils. Such a district was formed in Kent county and a sound conservation program is being worked out and put into operation. This is only a beginning, as the results and benefits of the extension demonstrations carried on by the Soil Conservation Service are arousing farmers in other counties to the seriousness of the situation and they are considering similar organized activities.

While it is not possible to segregate the results for a single year, there is ample evidence that a large percentage of the farmers of Maryland have been made conservation conscious and are taking definite steps to save and build their soils. More than 18,000 farmers have cooperated in the AAA program and carried out soil-building practices. In 1937, for example, the quantity of lime oxides applied per acre of cropped land in Maryland was exceeded in only two other states. It is known that a similarly large quantity was applied in 1938, and probably larger. Application of superphosphates, seeding of legumes and grasses, use of green manures, and other soil-building practices have likewise increased. No estimate can be placed on the number of years

that would have been required to place the important problem of soil conservation in the position that it occupies at present, had it not been for the efforts of the various agencies, all of which focused through the Extension Service.

Not only has distinct progress been made in correlating the specific conservation programs, but also in their integration with established extension programs. For example, the summer meeting of fruit growers featured a visit to a terraced orchard and discussions of soil conservation as applied to fruit growing. The specialist reports that in some sections of the State practically every orchard is signed up under the soil conservation plan and that there is a noticeable improvement in soil management practices. Livestock and dairy programs, as well as the agronomy program, are emphasizing the importance and value of pasture improvement, and methods for its accomplishment, not only as a soil-conserving practice, but also as a sound economic policy. In like manner, the conservation feature has been incorporated effectively in the program of other specialists, and the projects carried out by juniors.

Land Use Planning

A SYSTEMATIC plan was developed during the year, and substantial progress was made in putting it into operation, with the ultimate purpose of building a program for Maryland agriculture and rural life "from the ground up." With this effort starting in the respective communities, coming up progressively through the several counties and regions to the State as a whole, it is the aim to build a program that will best fit the needs of Maryland's widely diversified types of agriculture and conditions, and at the same time blend it into a sound program for the entire State.

Economic and efficient use of the land resources of the State, considered in its broadest aspects, is the foundation of this program-building project. By virtue of basic work done in former years, Maryland was fortunate in being able to start its land use planning program several steps in advance of most states. Instead of being forced to devote a considerable period of time and effort to classifications of land, the information on that phase of the program was found ready at hand. Maryland is one of the few states in which a soil survey has

been made of all counties. In addition to the complete maps showing the principal soil areas, the Experiment Station has provided a map in which the soils of the entire State are classified on the basis of their production.

Community and county committees were formed throughout the State, and a State Land Use Planning Committee was created. The information necessary to enable them to plan intelligently is supplied to the committees and with the cooperation and help of agents and specialists of the Extension Service, they are entering earnestly into the land use program planning project. The theme of the annual Extension Service conference is "Land Use Program Planning," and three regional conferences are being held in different sections of the State, instead of the single conference at the University. It is the aim to give local leaders an opportunity to attend and participate, and to obtain the benefit of their advice and counsel.

During the coming year, the land use planning program will be a major activity and will engage the efforts of all extension workers.

Marketing

WHILE there have not been the acute problems that are encountered some years in marketing one or more agricultural products, there has been a significant increase in the interest and activity displayed by producers in improved marketing of their commodities. Increased demands for assistance in grading and standardizing their products are evidence of the greater desire on the part of fruit and vegetable growers to market their products on a sounder basis. Producers of poultry products and eggs were especially active in the marketing field. A Poultry Products Marketing School, held at the University for the first time, was an outstanding success. Assistance was given in organizing the Maryland Turkey Producers' Association, which has as its object the identifying of the Maryland turkey quality, both in the State and in out-of-state markets. Apple growers of Maryland, in cooperation with growers in other Eastern States, are carrying on an extensive campaign of advertising to encourage the use of apples, and especially of Eastern apples. Producers of practically all other products have taken cognizance of the important role which marketing plays in net income realized

from their farming enterprises and are seeking help in providing better systems for selling and distributing their products. Programs of the immediate future must place marketing on a par with production in the attention and effort given to it.

Members of the State Dairy and Livestock Advisory Council, which was selected by the agricultural council of the University of Maryland to advise officials and specialists in developing a program covering all phases of those industries.

Stockmen Active

INTEREST in the various kinds of livestock continued to grow and the demands upon the Service in connection with an expanded livestock program made for one of the outstanding activities. Particularly in the case of draft horses, beef cattle and hogs was there unusual development, both in the work with adults and with juniors. In number and quality, the exhibits at fairs and shows surpassed those of any previous year and were significant of the progress made by the industry during the last few years. The number of high-class animals brought into the State is being reflected in the exhibits and Maryland is becoming a recognized center for first-class breeding stock for some of the breeds.

Homemakers in Broad Program

WHILE the rural women continued to focus their attention upon a many-sided program of "Better Family Living," they extended their interests to include active par-

ticipation in plans and programs pertaining to economic conditions. With a keen appreciation of the importance of conserving all kinds of resources, the women joined heartily in the efforts to plan for more efficient use of the land. Their programs in the several counties were built around specific needs and the greater leadership assumed by the local women made it possible to expand the work. Project demonstrators increased in numbers and in their ability to impart the training given them in training schools to the members of homemakers' clubs throughout the State.

The Rural Women's Short Course has had an influence on rural life in every community. Held at the University for the sixteenth consecutive year, it afforded an opportunity for advanced work in adult education and training for leadership to more than 700 rural women.

Drainage

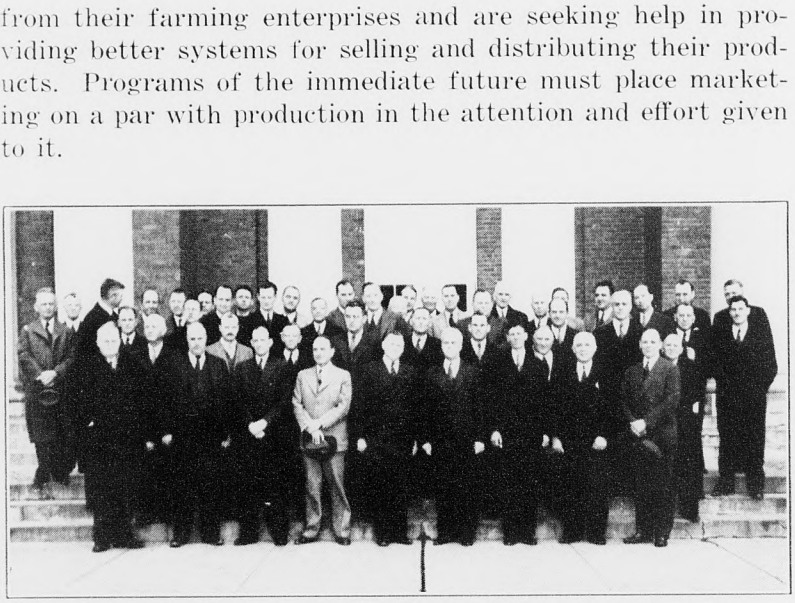
ALTHOUGH a Federal project, an outstanding piece of work was carried on in this field by cooperation of the Extension Service through the specialist in agricultural engineering. He served as district engineer with general supervision over the work program of three CCC camps.

From January 1, 1938, to October 1, 1938, these camps cleared 2,033,174 square yards, or 420 acres of ditch banks and channels, and excavated 515,809 cubic yards of material from channels. At a conservative estimate, this work, if done at the expense of the farmers benefitted, would have cost $194,650.

Rural Electrification

MARYLAND has moved from 21st place to 16th place with respect to the percentage of farms using central station electricity during the three years in which rural electrification extension work has been carried on, according to statistics given out by the Edison Electric Institute. There are now 16,600 farms in the State with electric service. A Rural Electric Administration project in Southern Maryland is in operation and a project has been organized in Caroline and Queen Anne counties, which will serve approximately 300 rural families. Together with these extensions, a well-balanced

from their farming enterprises and are seeking help in providing better systems for selling and distributing their products. Programs of the immediate future must place marketing on a par with production in the attention and effort given to it.



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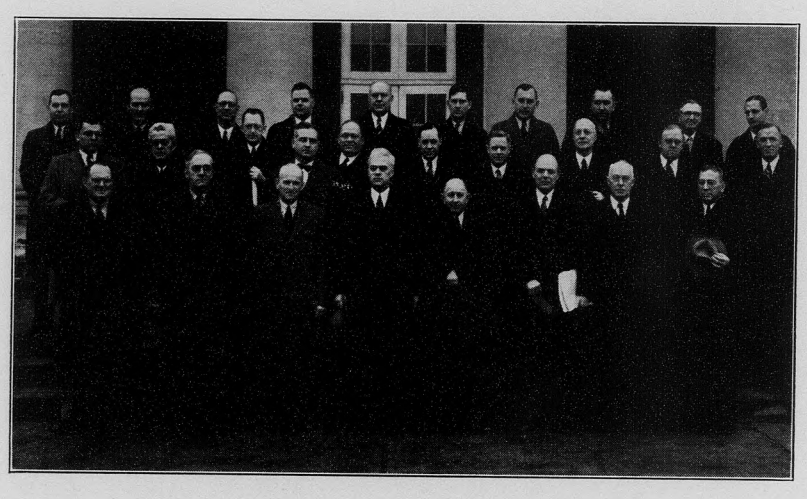
educational program, including men, women, and boys and girls, has been a factor in the increased use of electric power.



This State Advisory Council on Crops and Soils is helping to develop the program in agronomy.

Crop Yields and Values

FROM the standpoint of production, the season of 1938 was fairly favorable for most of the principal crops grown in Maryland. With a few exceptions, yields were above the average for the last ten years. Lower prices, however, reduced the income to farmers for their labor and investment.

Preliminary estimates by the Division of Crop Estimates of the U. S. Department of Agriculture placed the total value of Maryland crops in 1938 at $42,636,000, or 10 percent below the farm value of crop production in 1937, estimated at $47,508,000. In addition to these amounts, approximately 18,000 farmers earned about $1,500,000 each year by their cooperation in the AAA programs. Compared with a total crop value of $58,246,000 in 1936, the last two years do not appear so favorable for the farming industry.

Yields per acre for the following crops were higher in 1938 than in 1937: Corn, wheat, oats, buckwheat, sweet potatoes, hay, tobacco, tomatoes, sweet corn, and snap beans.

Total production was greater than the preceding year for the following crops: Wheat, oats, barley, buckwheat, sweet potatoes, hay, tobacco, sweet corn and snap beans.

Crops with the same, or increased acreage over the year before were: Oats, barley, buckwheat, sweet potatoes, tobacco, cantaloupes, strawberries and snap beans. All of the other principal crops showed some reduction in acreage.

The prices per unit for the following products were higher than in 1937: Sweet potatoes, tobacco, apples, peaches, grapes, tomatoes, and strawberries.

With the exception of buckwheat, sweet potatoes, tobacco and tomatoes, the total value of each of the other principal crops was lower in 1938 than in 1937.

Numbers of all kinds of livestock on farms increased, with the exception of sheep and lambs and mules. There is an estimated increase of 2,000 horses and colts, 8,000 dairy cows and heifers, 4,000 other cattle, and 19,000 swine.

A more detailed record of the acreages, yields and values of the principal crops grown in Maryland and the numbers of livestock on farms on January 1, 1939, is given in the following tabulation. For the sake of comparison, similar figures are given for the two preceding years. These estimates are furnished by the Bureau of Agricultural Economics of the U. S. Department of Agriculture in cooperation with the Extension Service.

PRODUCTION AND VALUE OF CROPS

Crop and Year	Acres	Per Acre	Total	Unit	Per Unit	Total	Value Per Acre
Corn							
1938	501,000	37.0	18,537,000	Bus.	$.55	$10,195,000	$20.35
1937	516,000	36.0	18,576,000	"	.61	11,331,000	21.96
1936	511,000	36.0	18,396,000	"	.97	17,844,000	34.92
Wheat							
1938	471,000	20.0	9,420,000	"	.63	5,935,000	12.60
1937	476,000	19.0	9,044,000	"	1.02	9,225,000	19.38
1936	449,000	20.0	8,980,000	"	1.06	9,519,000	21.20
Oats							
1938	41,000	32.0	1,312,000	"	.35	459,000	11.20
1937	38,000	28.5	1,083,000	"	.44	476,500	12.54
1936	39,000	29.0	1,131,000	"	.51	577,000	14.80
Barley							
1938	41,000	30.5	1,250,000	"	.47	588,000	14.33
1937	36,000	33.0	1,188,000	"	.65	772,000	20.32
1936	40,000	25.0	1,000,000	"	.67	670,000	16.75
Rye							
1938	14,000	12.5	175,000	"	.63	110,000	7.88
1937	16,000	13.0	208,000	"	.85	176,800	11.05
1936	15,000	12.5	188,000	"	.85	160,000	10.70

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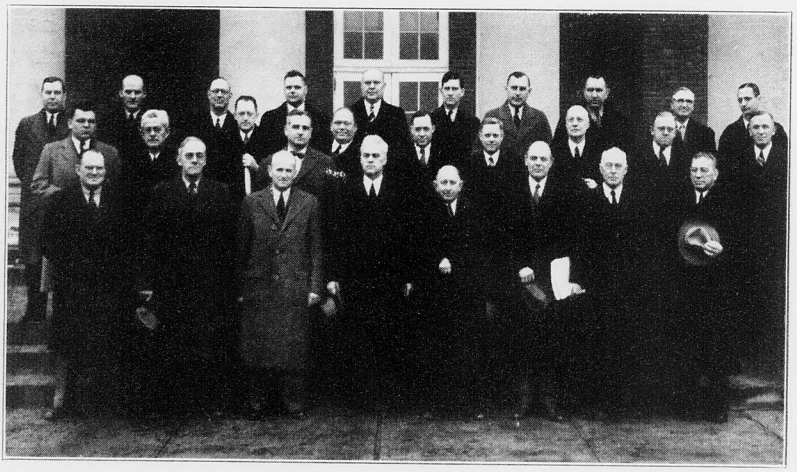

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Total production was greater than the preceding year for the following crops: Wheat, oats, barley, buckwheat, sweet potatoes, hay, tobacco, sweet corn and snap beans.

Crops with the same, or increased acreage over the year before were: Oats, barley, buckwheat, sweet potatoes, tobacco, cantaloupes, strawberries and snap beans. All of the other principal crops showed some reduction in acreage.

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1936	15,000	12.5	188,000	"	.85	160,000	10.70

PRODUCTION AND VALUE OF CROPS (Continued)

Crop and Year	Acres	Per Acre	Total	Unit	Per Unit	Total	Value Per Acre
Buckwheat							
1938	6,000	20.0	120,000	"	.62	74,000	12.60
1937	5,000	19.5	98,000	"	.70	69,000	13.80
1936	5,000	18.0	90,000	"	.80	72,000	14.40
Potatoes							
1938	26,000	115.0	2,990,000	"	.60	1,794,000	69.00
1937	30,000	116.0	3,480,000	"	.61	2,123,000	70.76
1936	28,000	105.0	2,940,000	"	1.08	3,175,000	113.40
Sweet Potatoes							
1938	8,000	130.0	1,040,000	"	.75	780,000	97.50
1937	8,000	125.0	1,000,000	"	.64	640,000	80.00
1936	8,000	150.0	1,200,000	"	.86	1,032,000	129.00
Hay (All Tame)							
1938	382,000	1.42	543,000	Tons	9.40	5,104,000	13.26
1937	385,000	1.35	518,000	"	11.60	6,009,000	15.60
1936	370,000	.88	327,000	"	15.10	4,938,000	13.30
Tobacco							
1938	37,500	780.0	29,250,000	Lbs.	.20	5,850,000	156.00
1937	35,000	670.0	23,450,000	"	.175	4,104,000	117.25
1936	37,500	820.0	30,750,000	"	.25	7,688,000	205.00
Apples (Total Crop)							
1938	.....	.....	2,118,000	Bus.	.70	1,483,000	.....
1937	.....	.....	2,847,000	"	.63	1,793,600	.....
1936	.....	.....	2,014,000	"	.89	1,792,000	.....
Peaches							
1938	.....	.....	352,000	"	1.10	387,000	.....
1937	.....	.....	448,000	"	1.05	470,000	.....
1936	.....	.....	279,000	"	1.45	405,000	.....
Grapes							
1938	.....	.....	580,000	Tons	50.00	29,000	.....
1937	.....	.....	750,000	"	45.00	34,000	.....
1936	.....	.....	740,000	"	50.00	37,000	.....
Tomatoes (For Mfg.)							
1938	56,000	3.1	173,600	"	14.10	2,448,000	43.71
1937	61,000	2.9	176,900	"	12.70	2,247,000	36.83
1936	55,000	4.7	258,500	"	13.10	3,386,000	61.60
Sweet Corn (For Mfg.)							
1938	34,000	2.5	85,000	"	10.50	892,000	26.24
1937	38,100	2.2	83,800	"	13.00	1,089,000	28.58
1936	34,000	2.3	78,200	"	11.70	915,000	27.00
Cantaloupes							
1938	9,400	75.0	705,000	Cr'ts	.60	423,000	45.00
1937	8,500	100.0	850,000	"	.65	552,000	65.00
1936	8,100	95.0	770,000	"	.85	654,000	80.60
Strawberries							
1938	8,100	55.0	446,000	"	2.95	1,316,000	162.47
1937	7,700	80.0	616,000	"	2.20	1,355,000	175.97
1936	7,500	45.0	338,000	"	2.50	845,000	112.67

PRODUCTION AND VALUE OF CROPS (Continued)

Crop and Year	Acres	Acres Total	Total	Unit	Per Unit	Total	Value Per Acre
Snap Beans (For Mfg.)							
1938	10,900	1.7	18,500	Tons	37.40	692,000	63.50
1937	10,100	1.6	16,200	"	42.80	693,000	68.60
1936	9,760	1.4	13,700	"	42.80	586,000	60.00
Green Peas (For Mfg.)							
1938	18,900	1880 Lbs.	17,700	"	52.90	940,000	49.73
1937	20,250	1800 "	18,220	"	57.30	1,044,000	51.55
1936	17,800	1250 "	11,120	"	50.60	563,000	31.63

LIVESTOCK ON FARMS
January 1, 1939

	Number	Value Per Head	Total Value
Horses and Colts	82,000	$112.00	$ 9,200,000
Mules and Mule Colts	28,000	132.00	3,696,000
Dairy Cows and Heifers (2 yrs. and over)	198,000	63.00	12,474,000
All other Cattle and Calves	124,000	31.50	3,850,000
Sheep and Lambs	77,000	6.90	534,000
Swine, including Pigs	210,000	8.80	1,845,000
Chickens	3,779,000	.86	3,250,000

ADMINISTRATION

THE administrative work of the Service has been carried on similar to former years. The Assistant Directors, Mr. E. I. Oswald and Miss Venia M. Kellar, have assumed increased responsibilities in their respective fields. Their devotion and loyalty to the work inspires confidence throughout the force and the cooperation received from heads of departments, specialists and the Extension field forces has been all that could be asked, even under difficult conditions. Mr. Paul E. Nystrom has served as County Agent Leader and has been able to devote more time to this work and to the coordination of activities as he was relieved of the office of State Executive Officer under the AAA early in the year.

The relationship of the Service to other educational institutions of the State has continued in a sympathetic and cooperative manner. Splendid relationship exists with the Vocational forces. This work is tied in closely with our Institution since the Assistant Dean of the College of Agriculture is State Supervisor of Vocational Agriculture. We believe that a wonderfully integrated program is being carried out in a very efficient manner.

Continued close relationship exists between the Extension Service and farm organizations, the State Grange, and Farm Bureau, and splendid cooperation has been given by the Boards of County Commissioners in practically all of the Counties. The fact that the State Committee on Soil Conservation is set up at the Institution with the Director of Extension as Chairman has been a great factor in promoting cooperation between this Federal activity and State forces. Mr. O. C. Bruce, State Coordinator in this work, has been thoroughly cooperative and we have been able to employ a joint worker, which has further integrated this work in several of the counties. A soil conservation district was formed, taking in the whole of Kent County and districts in other Counties will no doubt be set up during the coming year.

The great problem in the administrative field has been to direct the work with the tremendous additional burdens without sufficient funds. This applies particularly to the County Agents who have gladly assumed additional responsibilities with the various action programs and who are now charged with developing land use programs that involve a greater coordination of all activities than ever before. It is the urgent hope of the writer that additional funds will be available as soon as possible to relieve the great pressure that now rests upon our County Agent force. We need further assistance so as to permit the Agents to pursue their regular Extension activities, which are more and more being demanded by rural people.

I am pleased to acknowledge with warmest gratitude the loyal support of all forces, especially the Assistant Directors, Mr. P. E. Nystrom and Mr. A. H. Snyder, the latter of whom greatly aided in the preparation of this report.

EMPLOYEES AT HEADQUARTERS—1938

THOMAS B. SYMONS	Director
E. I. OSWALD	Assistant Director
MISS VENIA M. KELLAR	Assistant Director
A. H. SNYDER	Extension Editor
P. E. NYSTROM	County Agent Leader and Specialist in Farm Management
E. G. JENKINS	State Boys' Club Agent
MISS DOROTHY EMERSON	Girls' Club Agent
MISS FLORENCE H. MASON	District Agent and Specialist in Home Furnishing
MISS K. G. CONNOLLY	Administrative Assistant
*G. J. ABRAMS	Specialist in Apiculture
W. R. BALLARD	Specialist in Landscape and Vegetable Gardening
H. C. BARKER	Specialist in Dairying
W. C. BEAVEN	Specialist in Marketing
*R. W. CARPENTER	Specialist in Agricultural Engineering

*Part-time Specialist

EMPLOYEES AT HEADQUARTERS—1938—(Continued)

O. R. CARRINGTON	Assistant Extension Editor
J. A. CONOVER	Specialist in Dairying
*E. N. CORY	Specialist in Entomology
JOHN COTTON	Specialist in Soil Erosion
S. L. CROSTHWAIT	Horticultural Inspector
*S. H. DEVAULT	Specialist in Marketing
L. S. DODSON	Specialist in Sociology
LAWRENCE E. DOWNEY	Assistant Marketing Specialist
MYLO S. DOWNEY	Assistant in Club Work
*CASTILLO GRAHAM	Assistant Specialist in Entomology
J. M. GWIN	Specialist in Marketing Poultry Products
*W. E. HARRISON	Assistant Specialist in Marketing
MISS JESSIE D. HINTON	Home Management Specialist
H. A. HUNTER	Specialist in Canning Crops
*KENNETH C. IKELER	Specialist in Dairy and Animal Husbandry
J. R. IVES	Specialist in Farm Management
*R. A. JEHLE	Specialist in Plant Pathology
EBEN C. JENKINS	Soil Conservation Statistician
*MORLEY A. JULL	Specialist in Poultry
A. V. KREWATCH	Specialist in Agricultural Engineering
G. S. LANGFORD	Specialist in Insect Control
J. W. MAGRUDER	Specialist in Agronomy
A. F. MARTIN	Assistant Specialist in Marketing
MISS MARGARET MCPHEETERS	Specialist in Nutrition
*DEVOE MEADE	Specialist in Animal Husbandry
W. B. POSEY	Tobacco Specialist
*HARLAN RANDALL	Specialist in Music
W. H. RICE	Specialist in Poultry
*C. S. RICHARDSON	Specialist in Educational Extension
S. B. SHAW	Specialist in Marketing, and Chief of Maryland State Department of Markets
MISS HELEN SHELBY	Specialist in Clothing
M. M. SHOEMAKER	Specialist in Landscape Gardening
*C. E. TEMPLE	Specialist in Plant Pathology
H. J. TWILLEY	Assistant Specialist in Marketing
J. M. VIAL	Specialist in Animal Husbandry
A. F. VIERHELLER	Specialist in Horticulture
*E. A. WALKER	Horticultural Inspector
*E. P. WALLS	Specialist in Marketing and Canning Crops
F. B. WHITTINGTON	Assistant Specialist in Entomology
CHARLES WILLIAMS	Specialist in Poultry
C. F. WINSLOW	Specialist in Forestry

COUNTY AGENTS—1938

County	Name	Headquarters
Allegany	R. F. MCHENRY	Cumberland
Anne Arundel	STANLEY E. DAY	Annapolis
Baltimore	H. B. DERRICK	Towson
Calvert	JOHN B. MORSELL	Prince Frederick
Caroline	G. W. CLENDANIEL	Denton
Carroll	L. C. BURNS	Westminster
Cecil	J. Z. MILLER	Elkton
Charles	P. D. BROWN	La Plata
Dorchester	WM. R. MCKNIGHT	Cambridge
Frederick	H. R. SHOEMAKER	Frederick
Garrett	JOHN H. CARTER	Oakland
Harford	H. M. CARROLL	Bel Air
Howard	W. G. MYERS	Ellicott City
Kent	J. D. MCVEAN	Chestertown
Montgomery	O. W. ANDERSON	Rockville
Prince George's	P. E. CLARK	Upper Marlboro
Queen Anne's	KENNETH W. BAKER	Centerville
St. Mary's	JULIUS JOHNSON	Leonardtown
Somerset	C. Z. KELLER	Princess Anne
Talbot	R. S. BROWN	Easton
Washington	M. D. MOORE	Hagerstown
Wicomico	J. P. BROWN	Salisbury
Worcester	R. T. GRANT	Snow Hill

ASSISTANT COUNTY AGENTS

Allegany, Garrett, and Washington	H. W. BEGGS	Cumberland
Baltimore	J. WHEELER ENSOR	Towson
Harford	W. SHERARD WILSON	Bel Air
Kent	STANLEY SUTTON	Chestertown
Montgomery	RUFUS KING	Rockville
Carroll, Frederick and Howard	CHARLES REMSBERG	Frederick
Queen Anne's, Caroline, Talbot and Dorchester	CHARLES FULLER	Easton

*Part-time Specialist

Local Agents (Negro Work)

Southern Maryland	J. F. ARMSTRONG	Seat Pleasant
Eastern Shore	L. H. MARTIN	Princess Anne

HOME DEMONSTRATION AGENTS—1938

County	Name	Headquarters
Allegany	MAUDE A. BEAN	Cumberland
Anne Arundel	MRS. GEORGIANA LINTHICUM	Annapolis
Baltimore	ANNA TRENTHAM	Towson
Calvert	ANGELA M. FEISER	Prince Frederick
Caroline	BESSIE M. SPAFFORD	Denton
Carroll	ADELINE M. HOFFMAN	Westminster
Cecil	HELEN I. SMITH	Elkton
Charles	MARY GRAHAM	La Plata
Dorchester	HATTIE E. BROOKS	Cambridge
Frederick	FLORENCE E. WILLIAMS	Frederick
Garrett	MILDRED E. BARTON	Oakland
Harford	CATHARINE MAURICE	Bel Air
Howard	KATHRYN E. NEWTON	Ellicott City
Kent	HELEN N. SCHELLINGER	Chestertown
Montgomery	EDYTHE M. TURNER	Rockville
Prince George's	ETHEL M. REGAN	Hyattsville
Queen Anne's	RUBY KIRK	Centerville
St. Mary's	ETHEL JOY	Leonardtown
Somerset	HILDA TOPFER	Princess Anne
Talbot	MARGARET SMITH	Easton
Washington	ARDATH E. MARTIN	Hagerstown
Wicomico	JUDITH AULT	Salisbury
Worcester	LUCY J. WALTER	Snow Hill

ASSISTANT HOME DEMONSTRATION AGENTS

Allegany	MARGARET T. LOAR	Cumberland
Baltimore and Harford	ELIZABETH R. JOHNSON	Towson

Local Home Demonstration Agents—(Negro Work)

Charles, St. Mary's, Prince George's, and Montgomery	MRS. ARMINTA J. DIXON	106 Rhode Island Ave. Brentwood, Md.
	MISS DOROTHY RANSOM, Assistant	106 Rhode Island Ave., Brentwood, Md.
Somerset	MRS. JUSTINE N. CLARK	Princess Anne, Md.

Changes in Personnel

E. I. Oswald was designated Assistant Director, October 1, 1938.

Miss Venia M. Kellar was designated Assistant Director, October 1, 1938.

C. Z. Keller was designated District Agent and State Executive Officer in Soil Conservation, August 25, 1938. He is on leave of absence as County Agent in Somerset County.

F. W. Oldenburg, Extension Agronomist, died, January 22, 1938.

John W. Magruder was transferred from Specialist in Soil Erosion to Extension Agronomist, April 1, 1938.

James M. Gwin was appointed Egg Marketing Specialist, December 15, 1937.

Carl B. Smith was appointed Assistant Farm Management Specialist, October 1, 1938.

William H. Evans was transferred from Soil Conservationist to U. S. Government rolls in Soil Conservation, September 1, 1938.

Mark K. Miller was appointed Assistant County Agent in Queen Anne's County, August 22, 1938.

Miss Judith Ault was transferred from Assistant County Home Demonstration Agent in Carroll, Frederick and Montgomery counties to County Home Demonstration Agent in Wicomico County, January 1, 1938.

Miss G. M. Cookinham resigned as County Home Demonstration Agent in Wicomico County, December 31, 1937.

Miss Helen I. Smith was appointed County Home Demonstration Agent in Cecil County, August 1, 1938.

Miss W. G. Denning resigned as County Home Demonstration Agent in Cecil County, July 31, 1938.

Miss M. E. Manahan resigned as County Home Demonstration Agent in Howard County, May 31, 1938.

Miss Kathryn E. Newton was appointed County Home Demonstration Agent in Howard County, September 1, 1938.

Miss Agnes P. Soper was appointed Assistant County Home Demonstration Agent at Large, March 1, 1938.

Miss Margaret V. Morris was appointed temporary Assistant County Home Demonstration Agent in Dorchester County, June 27, 1938. She resigned, July 30, 1938.

Mrs. Arminta J. Dixon, colored Home Demonstration Agent in Montgomery, Prince George's and St. Mary's Counties, was granted leave of absence, January 1, 1938.

Miss C. M. Corbin was appointed colored Assistant Home Demonstration Agent in Montgomery, Prince George's and St. Mary's Counties, January 16, 1938.

Kenneth A. Clark resigned as part-time Animal Husbandman, May 15, 1938.

J. B. Outhouse was appointed as part-time Assistant Animal Husbandman, October 1, 1938.

J. R. Ives was appointed as part-time Specialist in Farm Management, July 1, 1938.

Dr. T. C. Byerly was appointed as part-time Poultry Specialist, October 1, 1938.

Dr. Herbert R. Bird was appointed as part-time Poultry Nutrition Specialist, October 1, 1938.

John Cotton was appointed as Specialist in Soil Erosion, July 26, 1938.

L. G. Worthington was appointed as part-time Assistant in General Educational Extension, October 1, 1938.

Sources of Extension Revenue

DURING the fiscal year ending June 30, 1938, there were available for Extension Work the following funds: Federal Smith-Lever, $60,023.83; Federal Smith-Lever Supplementary, $9,601.05; Bankhead-Jones, $89,980.07; Capper-Ketcham, $26,076.61; Additional Federal Cooperative Funds, $9,600.00; State Funds for Agriculture and Home Economics, $116,932.44; Special Dairy Funds, $3,344.18; Cantaloupe

Fund, $1,500.00; State Horticultural Fund, $11,712.94; Miscellaneous Funds, including Advanced Registry, State Department of Forestry Funds, Marketing Inspection Funds, etc., $48,412.63; and $67,391.50 contributed by the various counties; or a total of $444,575.25. In addition, $32,983.58 was used for Insect Control Work, and $12,588.08 was disbursed by the U. S. Department of Agriculture; making a grand total of $490,146.91. Also, $9,357.95 was used from an emergency appropriation for Japanese Beetle Control.

During the present fiscal year ending June 30, 1939, there are available: Federal Smith-Lever, $60,023.83; Federal Smith-Lever Supplementary, $4,800.53; Bankhead-Jones, $97,738.39; Capper-Ketcham, $26,076.61; Additional Federal Cooperative Funds, $6,700.00; State Funds for Agriculture and Home Economics Extension, $115,531.50; Special Dairy Funds, $3,576.00; Cantaloupe Fund, $1,500.00; State Horticultural Fund, $11,912.00; Miscellaneous Funds (estimated) including Advanced Registry, State Department of Forestry Funds, Marketing Inspection Funds, etc., $35,000.00; and $70,338.00 contributed by the various counties; or a total of $433,196.86. In addition, there are available $24,579.00 for Insect Control Work, and $20,986.64 disbursed by the U. S. Department of Agriculture, making a grand total of $478,762.50. Also, there is available an indeterminable amount, at least $20,000, for official Japanese beetle control work in cooperation with the U. S. Bureau of Plant Quarantine.

Equipment

NO SUBSTANTIAL additions in the way of equipment were made during the year. In most cases, the facilities in the way of space, office equipment, etc., in the county offices are reasonably adequate and some improvement is made practically every year. Additional space is needed at headquarters, but the building program now in progress should alleviate the present situation.

Records of Work

IT HAS been the aim from the beginning of Extension work in Maryland to keep such records as might prove of value in future years, in addition to those specifically required. As the Service has expanded, this has become increasingly

difficult, but the value of such records has become more and more apparent and appreciated. On the threshold of the twenty-fifth anniversary of organized extension work, the need for information regarding the earlier years is emphasized. Considering the size of the Service and the wide scope of its work, the assembling of the mass of records and condensing them into usable, permanent form is by no means a small task. However, it is the hope that the policy of preparing a somewhat detailed summary for each ten-year period may be continued. The summaries for the first two decades have proved well worth the labor and expense involved.

In spite of somewhat limited clerical force, the essential records of the Service have been kept in good condition. The problems incident to handling financial records become more and more complex and difficult. This work was handled in a competent and satisfactory manner by Miss K. G. Connolly, Administrative Assistant, and her associates.

The number of first-class letters mailed from headquarters during the year was 68,921, and the total pieces of mail numbered 136,929. In all, 115,280 first-class letters were sent by the Service throughout the State.

PUBLICATIONS

THE USE of publications of various types as a means of disseminating information pertaining to extension activities and progress continued to increase. No estimate can be placed upon the number of people who have received helpful information from the Service in that way, nor the space that has been devoted to educational and informative material of that kind.

The public press has shown increasing interest in agricultural affairs and has been an important factor in the progress of rural programs. Daily and weekly papers, and also publications of specialized types, have given liberally of their space and have cooperated heartily in carrying to people generally the information and news regarding developments in agriculture, and also the programs and progress of extension activities.

In return the Extension Service has cooperated with the public press by supplying authentic information. Both from

headquarters and from the offices of agents in the several counties, news stories were supplied regularly.

Extension Service Publications—The definite aim to make publications issued by the Service as effective as possible resulted in greater diversification in type. While the series of bulletins and circulars carried in former years were continued and supplemented, there is a distinct trend toward designing publications specifically for the purposes they are supposed to serve. The effectiveness and efficiency of well-planned publications in connection with practically all phases of extension work have been demonstrated so conclusively that they are made a part of practically all projects.

The Extension Service News, a monthly publication of news pertaining to activities of the Service and farm and home news in general was continued during the year. Approximately 3,000 copies are distributed monthly to leaders throughout the State. The value of a publication of this character has been proved during the twenty years it has been issued, and this value is even greater since the launching of a number of programs that are decidedly different from those conducted in former years.

Illustrative Materials—Charts, maps, graphs, lantern slides, films, moving pictures, and other forms of visual instruction are used more and more. In addition to the demand for such material for use at meetings and demonstrations, a number of exhibits were prepared. Only a small part of the need in that line could be supplied, but a large quantity of illustrative material was prepared during the year. The demand for illustrations of good quality increases constantly in connection with improvement of extension publications.

Radio—Commercial radio stations gave liberally of time on the air and much more time could have been obtained if the Service were equipped to use it efficiently. Five stations carried the daily "Farm Flashes" of the U. S. Department of Agriculture, with much adaptation as the specialists and agents saw fit to make.

Publications Issued—During the period from January 1, 1938 to January 1, 1939, the following publications were issued: Bulletin 50 (revised), "The Pattern Recipe," 16 pages,

5,000 copies; Bulletin 55 (revised), "Home Canning in Maryland," 28 pages, 5,000; Bulletin 59, (reprint), "Pickles and Relishes," 20 pages, 5,000; Bulletin 70 (revised), "The Small Vegetable Garden," 16 pages, 5,000; Bulletin 76 (reprint), "Electric Equipment in the Home, Its Care and Repair," 24 pages, 3,000; Bulletin 82, "Second Year Music Appreciation for Homemakers' Clubs," 28 pages, 8,000; Bulletin 83, "Production and Certification of Seed Potatoes," 34 pages, 2,500; Circular 61 (revised), "Brooding and Rearing Chicks," 16 pages, 5,000; Circular 125, "School Lunches, Part II, The Hot Lunch," 32 pages, 3,000; Circular 126, "Business Center in the Home," 6 pages, 5,000; Circular 130, "Maryland Chicks of Quality," 20 pages, 1,000; Pamphlet, "Maryland Spray Calendar for Apples and Peaches," 4 pages, 3,300; Leaflet, "Fight the Japanese Beetle," 4 pages, 50,000; Leaflet, "How to Repel the Japanese Beetle," 4 pages, 40,000; Leaflet, "Trapping the Japanese Beetle," 4 pages, 10,000; Leaflet, "Maryland Boys and Girls at the World's Poultry Congress," 6 pages, 5,000; Poultry Calendar Record Book, 32 pages, 1,000; Annual Report of the Extension Service, 88 pages, 2,000; Two booklets, "Graduate Courses for Extension Workers," 12 pages and 8 pages, 2,000 copies each; Extension Service News, 4 pages, 2,500 copies each month.

COUNTY DEMONSTRATION WORK

TWO fundamental principles have been dominant in extension work from its inception as an organized form of education. First, it has been the policy to bring the information directly into the home communities and to the farms and homes of rural people of all ages. Second, the demonstration method, whereby the practical application to local conditions and the results obtained were placed before those who might profit therefrom, has been among the most effective means of helping rural people to help themselves.

Maryland is proud of its record and of the representatives of the Service out in the counties. Within a few years after the origin of cooperative extension work an agricultural agent and a home demonstration agent was placed in each county in the State. So far as is known, Maryland was the first State to provide such service to all the people. Today, living in the rural communities, intimately acquainted with the people,

their conditions and problems, this corps of local extension workers is carrying the program of newer methods and ideals into the farm homes and widely disseminating through every available means the latest information, not only from the University of Maryland, but also from the U. S. Department of Agriculture and other research workers throughout the entire nation.

In addition to a county agent and home demonstration agent in each of the 23 counties in Maryland, there were during the past year eight assistant county agents serving 13 counties and two assistant home demonstration agents serving three counties.

Working in conjunction with the agents in the counties is a comparatively small staff of specialists, each of which is highly trained in his specific line of work. They not only assemble and interpret the latest information and help plan demonstrations in their respective fields, but are ready to aid the agents and the people with special problems and activities.

This complete extension organization is available to the colored people of the State, also. In the southern Eastern Shore counties and in Southern Maryland, where the colored population is most concentrated, four local agents—two men agents and two women agents—conducted work with Negroes in the farm and home problems. In other counties white agents assisted the colored people.

County Programs—While it has always been the policy to develop a definite program in each county each year, with the assistance of leaders in the farm and home affairs of the respective counties, the constant trend toward broader programs has resulted in greater attention to their formulation. The launching of many new programs in recent years, most of which were decidedly different in character and method of operation from those previously carried on, has necessitated the best efforts of all concerned in correlating activities and programs of the various agencies. Rural organizations of all kinds have been exceedingly helpful. Such organizations as the Farm Bureau, the Grange, community clubs and commodity marketing associations rendered valuable assistance not only in connection with planning the programs, but also in carrying them out during the year.

A substantial start was made toward coordinating county programs into regional, and later into a State program for Maryland that will be in harmony with the national program. When accomplished, it is the hope that all forces will be able to operate most efficiently in well coordinated programs that are at the same time adapted to development of the several special agricultural interests in the different parts of the State and the welfare of both rural and urban people in the State as a whole.

Changing Nature of Extension Activities—Throughout the almost 25 years of Extension work one of the principal means of bringing to farm people the information developed at agricultural colleges and experiment stations has been through demonstrations in new methods, skills and techniques in farm and home practices. From these successful demonstrations there has been an immeasurable spread of influence indirectly to other farm people in the communities.

Production problems are still basic in agriculture. The introduction of new and improved varieties of farm crops, the teaching of newer methods of disease and insect control, and the introduction of newer practices and techniques in growing high-quality products and in grading and marketing those products are best applied in rural communities by demonstrating their applicability under local conditions. However, a few local demonstrations in a community are now generally sufficient to introduce new practices and techniques. So great is the confidence in Extension workers developed through the years that means other than demonstrations are also used very effectively. Through the press and radio, at local meetings, through circular letters, by local leaders, by tours and exhibits, and in various other ways of contacting people, information is widely disseminated.

The use of newer extension educational methods has been particularly stimulated in recent years by the changing social and economic conditions that have influenced the many new action programs. A vigorous educational program has been conducted by extension workers through all available channels to help farmers understand the implications of these newer problems, as well as the many aspects of the new programs.

Marketing—As economic conditions have become more acute, marketing activities took on greater interest and importance. The fact that the products of farms are not sold and distributed more efficiently is without doubt the outstanding problem and challenge to leaders in agricultural affairs. As aid in that direction agents of the Extension Service have contributed in a number of ways. Advice in the production of high-quality products and also in their preparation for market, demonstrations in proper grading, inspection service, getting buyer and seller together, assistance in disposal of surplus commodities, and support and assistance to existing marketing organizations, together with encouragement of cooperative marketing generally, are among the activities in which extension agents have engaged.

Leadership—In the final analysis, there is but one program and that is the bringing of rural people to a better standard of living. All other so-called programs are but a means to that end. Therefore, county extension workers have become administrators of the many activities and programs in their respective counties, to so direct and correlate those activities in the light of local conditions and problems as to make them most effective in assisting the local people to attain the goal of a higher standard of living. Much of the work has involved careful training of office assistants and of local leaders to whom many activities have been largely delegated by the extension agents.

The training and strengthening of leadership have also been directed into many other channels. Extension workers have cooperated fully in the progress of farm and community organizations. The harmonious relations that have maintained with the Farm Bureau and Grange and the cooperation of members of those organizations in efforts to improve rural life have been potent factors in the degree of success achieved. The spirit of mutual helpfulness that has prevailed contributed substantially to the benefit and success of all concerned.

Extension agents have taken an active part in the affairs of civic organizations and the many small clubs which are rendering excellent service in improving local conditions generally. Organization of older youth groups to assume leadership in 4-H activities and in other phases of community improvement, and the strengthening of the 4-H program in

training boys and girls for their role of future leaders were important parts of the county extension programs.

Negro Demonstration Work

The extension work with Negroes is organized and conducted in a manner very similar to that outlined for the white population. In the sections of the State in which Negro local agents are employed, somewhat more intensified programs for the specific needs of colored people are planned and carried out.

Negro farmers have been affected to a less extent by the so-called action programs of recent years and the projects given major attention by them were similar to those of former years. The problem of producing and conserving a larger portion of the food needed for the family, together with the provision of better sanitary and living conditions continued to rank among the foremost projects. The records made by the colored people, both adult and boys and girls, in the lines mentioned are very commendable.

Unfortunately, the illness of James F. Armstrong, who had served as local agricultural agent in the Southern Maryland counties for twenty years, seriously interfered with the program planned in that section. Early in 1939, before preparation of this report, Mr. Armstrong passed away. In his passing the Extension Service has lost a very conscientious worker who accomplished much for his people and who enjoyed their respect and confidence.

HOME DEMONSTRATION WORK

WITH the economic situation of farm families in Maryland as a background, the Home Demonstration work was planned on the basis of a three-year program for Better Family Living. Rural families are appreciating more fully the value of long-time programs. State Committees of home demonstration agents and County Committees of homemakers analyzed county needs and planned programs around such needs. Project demonstrators increased in numbers and in their ability to help reach more homemakers.

The sentiment throughout the State toward this work is excellent. The time has come when the entire rural family can pretty well analyze its problems and knows what to ask

for in the way of guidance and help. They have a desire to be helped by Extension workers, because this competent, conscientious, and every-ready group has established itself in the confidence of rural people.

Cooperation with Other Agencies—Close coordination of the extension program with those of other agencies having an influence directly or indirectly on the rural home has increased the efficiency and effectiveness of all. The close cooperation of workers for the several agencies was a gratifying feature of the work. Social workers, county nurses, the State Department of Health, the Farm Bureau, the Grange, the Farm Security Administration, and other agencies, have worked with home demonstration agents and specialists in programs of mutual helpfulness.

Projects—Brief summaries of some of the projects in which full-time specialists are employed as leaders are presented later. Assistance in other projects was given by the specialists in their respective lines, such as rural electrification, landscape gardening, and economics. Still others were carried by the combined efforts of various persons. These include particularly those of a cultural nature. They have become a part of all home demonstration programs. A greater number of homes have been made more beautiful on the outside, which is a family project. The satisfaction that comes to the homemaker, as well as all members of the family from reading better books, enjoying music, learning to know good pictures, and taking part in recreational activities has done something to the entire home life that cannot be measured in dollars and cents.

Cultural Projects—Women were helped in various ways to satisfy their desire for reading good books. They were very appreciative of lists sent to them for the purpose of aiding in the selection of books to read. So great was the demand that the Library Commission was unable to satisfy it.

Art appreciation and recreation were other cultural activities that were given definite attention. Studies of old homes and old churches, of which Maryland has a rich heritage, proved of great interest and were an effective means for developing appreciation of the beautiful.

Music appreciation has become a very definite part of all club work. A number of county choruses have been organized and have made a contribution to the cultural life of the county. Since this project was started as a part of Extension work, there has been a noticeable improvement in the quality and type of songs sung at all State meetings, county meetings, and by individual groups. Two bulletins, prepared especially for use in club work, have served their purpose of creating interest in music appreciation.

Achievement Days—Probably no other county-wide activity during the year gives as much to the homemaker, whether she is a club woman or not, as does the achievement day program. They look upon this program as a measuring stick to check their accomplishments and to serve as a new challenge when making their goals for the coming year. It is at occasions of this kind that the great progress in Extension work can be observed and the trends that programs should take in the future are indicated. The wonderful leadership developed in the last few years, the poise, confidence, interest and ability to take part in the program demonstrate what the Extension Service has done in the field of adult education.

Tours—There has been a change in character of tours in the last two or three years, but they continue to have a part in the program. There was an evident desire among the women to go outside of their county to visit historical places

Farm women from Maryland who made a three-day tour to New York City, sponsored by the Extension Service in cooperation with the Baltimore and Ohio Railroad.

for in the way of guidance and help. They have a desire to be helped by Extension workers, because this competent, conscientious, and every-ready group has established itself in the confidence of rural people.

Cooperation with Other Agencies—Close coordination of the extension program with those of other agencies having an influence directly or indirectly on the rural home has increased the efficiency and effectiveness of all. The close cooperation of workers for the several agencies was a gratifying feature of the work. Social workers, county nurses, the State Department of Health, the Farm Bureau, the Grange, the Farm Security Administration, and other agencies, have worked with home demonstration agents and specialists in programs of mutual helpfulness.

Projects—Brief summaries of some of the projects in which full-time specialists are employed as leaders are presented later. Assistance in other projects was given by the specialists in their respective lines, such as rural electrification, landscape gardening, and economics. Still others were carried by the combined efforts of various persons. These include particularly those of a cultural nature. They have become a part of all home demonstration programs. A greater number of homes have been made more beautiful on the outside, which is a family project. The satisfaction that comes to the homemaker, as well as all members of the family from reading better books, enjoying music, learning to know good pictures, and taking part in recreational activities has done something to the entire home life that cannot be measured in dollars and cents.

Cultural Projects—Women were helped in various ways to satisfy their desire for reading good books. They were very appreciative of lists sent to them for the purpose of aiding in the selection of books to read. So great was the demand that the Library Commission was unable to satisfy it.

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and to see and do things that in some way might be related to some of the projects they have been carrying. Tours were made to Annapolis and Washington to study types of architecture, old homes, visit the State and National Capitols, the Bureau of Home Economics, and other Federal bureaus. One county planned monthly tours to Baltimore to visit art galleries, libraries, hospitals and factories.

An educational tour to New York, in which 81 women participated, was sponsored by the Baltimore and Ohio Railroad. It was interesting to observe that, due to their study of period furniture, art, early American history and textiles, all of the women said they enjoyed the time spent in the Metropolitan Museum of Art more than any other part of the trip.

State Council of Homemakers—For many years the State Leader, as well as the women of the State, have felt a definite need for an organization of all the Homemakers' Clubs. It was found that all counties were intensely interested and desirous of seeing such an organization formed and in February the State organization of Homemakers' Clubs became a reality.

After many years of planning and looking forward to a State Council, there is now a fine group of women who can and will act in an advisory capacity to the Assistant Director in planning Extension programs.

Older Youth—A number of the older 4-H club boys and girls who have been in club work for a period of years are demonstrating a great deal of interest in group discussions, travel talks, and other subjects in which they are interested and of which they have some knowledge. Formation of a State Council of County Councils during the past year was a step in cementing the interest of older boys and girls in programs to meet their needs and at the same time help them in self-improvement and appreciation of what the Extension Service can do for them.

Rural Women's Short Course—This event, which was held at the University of Maryland for the sixteenth consecutive year, has become a potent factor in Home Demonstration work throughout the State. Men, as well as the women, are coming to realize what this course means to every family

that is represented for the week by either mother or daughter. It is giving to rural women a new vision of what education means to family life, and is furnishing them with an opportunity to develop leadership and a broader vision of what lies ahead in adult education.

For the last two years the attendance has been more than 700. It has become necessary to limit the registrations to approximately that number until additional housing facilities are available.

A common scene on the campus during the annual Rural Women's Short Course, which was held for the sixteenth consecutive year in 1938. More than 700 women from all counties attended.

The policy of providing a well-balanced program of practical, cultural, inspirational, social and recreational features was continued. More and more the women themselves can be called upon for worth while contributions to the program. Music has been one of their outstanding contributions and everyone who hears them sing goes away with the feeling that they have never heard group singing with so much enthusiasm.

The Style Show instituted this year was a particularly impressive affair. The women displayed with grace and charm the dresses they had made themselves and derived personal satisfaction and enjoyment from styling before the 700 women.

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What the women take home from their week at the University can never be measured in dollars and cents, but what they get in inspiration, vision, self-confidence and contacts with women from all over the State serves as a new outlook on life. They return to their homes and give thorough reports and demonstrations to fellow club members, so that, in effect, the Short Course exerts a vital influence throughout the entire year.

Work With the Negroes

The three Negro home demonstration agents continued to render valuable assistance to their people in five counties of the State. They featured the Better Family Living program, which emphasizes the importance of food production and conservation, home, canning, clothing, sanitation, and health. Some of the results reported by these agents are especially gratifying. Their food production project has done much to help Negro families live through periods when there was little or no work to be done. They emphasized to the families that were working with them that it was necessary to raise their own food and conserve it in order to have any money available to expend for clothes and other necessities of life.

The counties in which the local agents worked had their achievement days, rallies, tours, etc. In fact, their program differed but little from the general Extension program. It is hoped that the time will soon come when there may be more local home demonstration agents to work with the Negro families. They are most responsive and very eager for help. Much more could be done with them than has ever been done in the way of sanitation, the raising of gardens, the teaching of food values, and in home management, if the personnel and facilities were available.

CLOTHING

PROVIDING clothes for the family that are suitable for activities, becoming in line and color, of a quality in keeping with desires for better family living, and in accordance with the planned family income and expenditures is a problem requiring careful thought and planning. The Extension program was designed to assist rural families with that problem and stressed the importance of good management of the money, skill and factual information available.

Family Wardrobe Planning—In counties where much time had been given to clothing in former years there was an interest in up-to-date developments in new fabrics and how to handle them, style trends, the new silhouette and new color combinations. Women who cannot make frequent trips to a city for shopping were kept in touch with current trends in styles. The cooperation of stores by putting on fashion shows proved an effective aid in this project.

Records of Clothing Costs—The requests for record blanks for both adult and 4-H groups show a growing interest in a more business-like way of handling money available for family living. This phase of the project was stressed in former years and many women have learned the value of records so that keeping them is now a habit. The exchange of information at club meetings following a period of keeping records and the study of certain articles, such as school shoes, has an influence on buying habits that cannot be shown in statistical reports.

Construction of Clothing—Despite the fact that there is an increase in the number of homes where there is no time given to making clothes, there are enough interested in this phase of the project to warrant its continuance. Various plans and methods of improving skill and interesting girls and women in making clothes were suggested to the county program planning committees and were interpreted by them to meet the needs of their respective counties.

Sewing Machine Clinics—Efficiency in construction and repair of clothing and household linens is seriously impaired in many homes by the poor condition of the sewing machine. While this was found to be a somewhat difficult problem with which to render assistance, efforts were made in a number of ways. Demonstrations on cleaning, oiling and minor adjustments, given in homes, schools and in community halls, proved effective. Representatives of sewing machine companies cooperated in conducting clinics in some localities. The results were promising and the women showed great interest.

Clothing for Children—This has been a helpful phase of the clothing project for a number of years, especially as it applies to clothing for the pre-school child. Mothers were assisted with their problems relating to planning, buying and making

clothes for children, attention being given to clothing in relation to its effect upon the child's development and behavior.

Features of the Year—1. Discussion of consumer information on quality and durability of clothing; 2. Style revues and shopping tours to stimulate interest in wardrobe planning and better buying practices; 3. A beginning was made in arousing interest of 4-H boys in grooming, posture and selection of clothes; 4. Greater recognition of the importance of good posture and grooming in relation to clothing and personal appearance by all members of the family.

FOODS AND NUTRITION

TWENTY-TWO of the 23 counties in Maryland report results in some phase of foods and nutrition work with adult groups. The 4-H club results are reported in the summary of work with those groups.

Some phase of the work was conducted in 384 communities by 24 county home demonstration agents and 327 volunteer leaders or members of committees who contacted more than 10,000 homemakers at over 1,100 method demonstrations and other types of meetings. There were 698 home visits, 232 different news stories and circular letters written, and 992 office calls received in the interest of this line of work.

The fact that food constitutes the major item in farm family living and that the cash spent for food purchased is the major item in money expenditures has greatly influenced the food and nutrition program this year. The study of the family's food supply was continued and in several counties emphasis was placed on detailed analysis of each family's food situation.

Food Budgets—In the early spring approximately 1,847 homemakers worked out in detail their family's yearly food budget, considering carefully the nutritional needs of each member of the family. They then determined the size and kind of orchard and garden required, the amount of cereals to produce, how much milk, cream and butter were needed and the number of cows necessary to supply the required amount. They determined also the quantities of meat, fish, poultry and eggs they should have and the number of meat animals and size of poultry flock necessary to supply the needs.

After determining the nutritional needs of their families and how much of them they could produce, they estimated the amount of staple foods their families would require for the year and how to obtain them with as small outlay of cash as possible. The majority of these 1,847 homemakers saw to it that the required amount of food was produced and preserved in various ways at home.

Aid to Mothers and Children—Mothers of young children are becoming more keenly interested in the nutritional welfare of their children and see more clearly the value of forming good food habits early in life. Reports show that 409 mothers followed recommended methods of child feeding.

There was an apparent need for more concentrated efforts to improve school lunches. This work was started during the year and will be given even greater attention in 1939. Results show that 57 schools followed recommendations for a hot dish or lunch served at school and approximately 2,700 children received benefit from this improvement.

Assistance in Other Projects—In cooperation with the potato specialist, an effort was made to determine more definitely and to demonstrate the cooking qualities of the varieties of potatoes produced in Maryland.

In five counties the mothers who came to the prenatal clinics with their food problems were given aid, with the cooperation of the State Department of Health. This phase of the work succeeded in reaching many people in poorer circumstances, whom it had seemed impossible to reach in other ways.

As in former years, assistance was given to women who desired to sell surplus or produce extra food products for the purpose of adding to the family income. It is necessary to constantly emphasize standardization and high quality of food products in order to maintain steady sales.

HOME FURNISHING

IMPROVEMENT of the home by way of its furnishings results in far-reaching benefits to the entire family. Its influence extends beyond the effect upon physical comfort and pleasure into the realm of family relations, family develop-

ment, recreation and social satisfactions that are the very foundation of wholesome home life.

In one way or another, thousands of homes have been made more attractive and livable through the information and assistance given during the year. In such matters as the selection of household furnishings, improved methods of repairing, remodeling and refinishing furniture, treatment of walls, woodwork and floors, shades, curtains and drapes, and the principles of color and design in improving the appearance of rooms, the specialist in home furnishing and the agents in the several counties have helped homemakers throughout the State.

Special emphasis this year was placed on the arrangement and use of furniture and economy in the use of color. Definite reports indicate that more than 3,000 families rearranged rooms in accordance with the principles suggested.

Interest in applied practices and development of skills continued and was the means for rendering very helpful service. In response to this interest, assistance was given in such practices as making hooked rugs, repairing spring cushion units, refinishing furniture, chair seating, selection of china and linens, making slip covers, and the provision of consumer information that made possible more intelligent buying of house furnishings.

There is growing evidence that women, through their study of home furnishing, are realizing more fully its contribution to individual and family development in the home. When making new additions or replacements, they are asking "What furnishings do my family need to add to the enjoyment of living together, widen their interest, develop new interests, have more recreation in the home, develop hobbies, increase social satisfaction, promote health and increase comforts?"

HOME MANAGEMENT

FOR A number of years there has been a growing interest among rural women in the common business practices involved in the affairs of the home and family. In order to meet the desire for assistance in that field, a definite extension project was organized. Since it is in more or less of a formative stage, it is natural that considerable revision is made

from time to time with a view to emphasizing the phases of greatest interest to the women.

During 1938, attention was given to a wide variety of matters with which practically every family must deal. They included demonstrations and information on such everyday business practices as writing checks, making deposits, installment buying and other home credit methods; relationship of law and the home, in which legal contracts, wills, property rights of women, and inheritance were discussed by a local lawyer; family cooperation in money management, in which the family council, children's allowances, and personal accounts were considered; home accounts—methods of keeping them and use of the results; encouragement of a simple but unified business center in the home; saving for economic security; planning expenditures, in which actual results of analyses of Maryland home accounts were used as a basis for suggestions as to a spending plan adapted to the income and needs of the family.

Home Accounts—Interest in this part of the home management work continued active and it proved to be an important part of the project. The accounts not only helped the women to see more clearly their financial status and problems, but also helped in many ways toward a better family understanding and better family cooperation.

Especial interest was shown in an analysis of books kept in 1937, which afforded those who kept records an opportunity to compare their figures with the average for a number of record-keepers.

GIRLS' 4-H CLUBS

IT IS difficult to summarize briefly the well-rounded training and development that thousands of Maryland girls have received during the year through their 4-H club activities. Of the 6,195 girls enrolled in all projects, 82 percent, or 5,085, completed their projects.

The assistance given by local leaders in developing and carrying on the work deserves distinct recognition. Stronger leadership was evident in the progress made. More homemakers clubs are assuming responsibility for finding local leaders for their 4-H clubs, and more leaders are serving

longer than one year. The Senior Councils in some sections are providing excellent leaders.

Projects—The clothing project continued to attract the largest enrollment. Practically every county held a style revue, where representatives were selected for the State Style Revue. Good grooming and posture were added phases of the program.

Interest in foods has changed somewhat from that of a few years ago, when attention was focused principally upon preparation of meals and food preservation. While many girls continue work of that type, and demonstration teams are on the increase, interest has been aroused in such activities as healthful school lunches, meals for banquets and camps, and for other special occasions.

Other projects carried by the girls included ornamental and vegetable gardens, poultry, home furnishing, home management, and handicraft.

Community Activities—Reports show closer cooperation ever developing between the adults and 4-H club members. When club members hold their banquets, it is customary to invite not only parents and friends, but representatives of the county organizations, such as Service Clubs, Grange, Farm Bureau, Homemakers, and ministers from the local churches. Joint activities take widely different forms in various counties and communities, but there is general sentiment that both organizations have been strengthened by cooperative efforts.

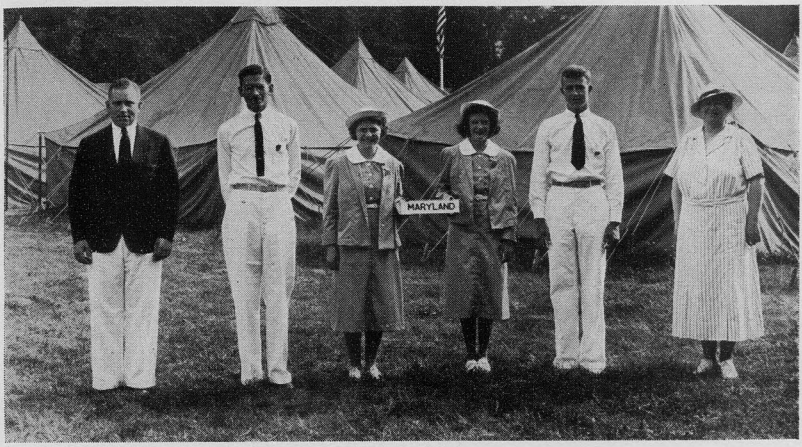
Camps—It has been demonstrated that well-planned and conducted camps afford splendid opportunities for promoting the 4-H ideals and building a stronger home economics program.

Harford Camp, which was built on a tract of 163 acres purchased 12 years ago, is now paid for. This county was the first in the United States to purchase and build a permanent county camp. It now has two dormitories, a club house, athletic grounds, and the largest concrete swimming pool in the county.

Garrett County has a beautiful new comp in the recreational area developed by the Farm Security Administration. There are 12 large cabins put up in units of three quite apart from the others and hidden among the trees. A large dining room

and kitchen overlook the new-made lake and special housing is provided for the camp nurse and leaders. Toilet and sanitary arrangements are of the highest standard.

Facilities for camps were obtained in various ways in several other sections of the State, in some cases two counties holding joint camps. The programs of training were adapted to the needs and desires of the respective groups.



Maryland 4-H Club members who represented the State at the National 4-H Club Camp in Washington, D. C. From left to right, they are: Mylo S. Downey, assistant boys' club leader; Henry Koller, Jr., Carroll County; Dorothy Fouche, Frederick County; Mary King Wilson, Allegany County; James Davis, Harford County; and, Dorothy Emerson, girls' club agent.

Two Maryland girls, Dorothy Fouche of Frederick County and Mary King Wilson of Allegany County represented the girls' 4-H club members of the State at the National Camp in Washington.

Club Week at the University—The program was planned this year to permit each girl to select the major demonstration she would attend daily. This policy resulted in increased interest and attendance at the various types of demonstrations. The major groups included clothing, foods, room furnishing, home management, music, crafts, leadership and discussion.

A feature of the week, as in recent years, was the State Style Revue, given on an outdoor stage. One hundred and ten girls styled their well-made garments that had placed first in county style revues. An innovation this year was a special

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Older Youth—A State Council composed of older youth membership was formed during the year. Its object is to develop, strengthen and correlate the work of the county 4-H Councils in the State, to cooperate with the State Extension Service in determination of State-wide policies, and with all other State organizations in movements of interest to rural youth. Prospects are promising that approximately one-half of the counties of the State will have progressed sufficiently with their organization and program to become members of the State Council soon after the first of the year.

BOYS' 4-H CLUB WORK

ENROLLMENT in Boys' 4-H Club Work was the largest since it was organized. The total number enrolled was 4,886 and projects were completed by 4,159 members.

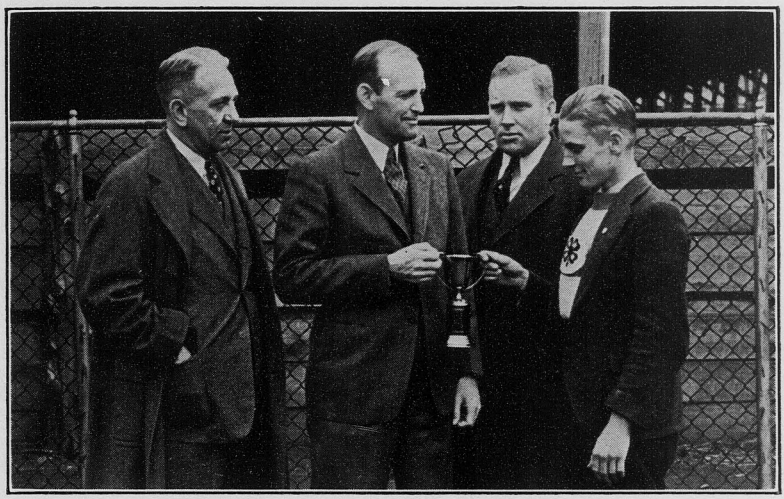
Livestock—Special attention was again directed to livestock. The intensive instruction given to assistant county agents by the University of Maryland is showing results in improved practices in feeding and management, as well as in meeting the market demands.

Swine project work showed the largest increase (20%). More boys are feeding swine for market by approved methods and in scores of cases improving the farm methods and increasing the farm income.

Dairy projects continue to lead all 4-H work with livestock. That quality of animals continues very high was evidenced by placings of a number of entries in open classes at the State fair. Increasing emphasis is being placed on improvement of dairy breeding and management on home farms. The number of boys buying purebred bulls to head farm herds of grade cows is increasing, and many boys are keeping records on mature females.

Baby beef clubs continue to interest boys, notwithstanding the difficulty in securing calves. All boys who followed Extension Service advice on feeding are reported to have made money this year. Interesting and instructive exhibits were

made at the Hagerstown and Timonium fairs and at the Baltimore Livestock Show, and successful sales were held at Hagerstown and Baltimore.



William Hare, 4-H Club member from Carroll County, receiving the trophy from J. C. Cash, President of the Union Stock Yards in Baltimore, for having the champion pen of lambs in the Western Lamb Show and Sale.

Lamb feeding was the basis of a special project this year. It is practically impossible to buy the right type of lambs at a reasonable price and at a time of year to meet the exhibit and sale attraction at the Baltimore Livestock Show. Feeding western lambs is being tried as a worthy project for 4-H club members. Three hundred and five lambs were purchased on the Omaha market to be distributed among 20 Maryland boys, fed out and sold at the Baltimore Stock Yards, the best fat lamb market in the country during January and February.

Colt club projects, in which six or more boys participated, expanded to seven counties in 1938. Maryland has an enthusiastic interest in a horse improvement program and 4-H club work is influencing its progress. In six years enrollment has increased from one member to 141. In 1938 there were 165 colts and horses fed and managed by 126 boys who completed their projects. Splendid exhibits in Washington, Frederick and Talbot Counties elicited enthusiastic comments. Boys

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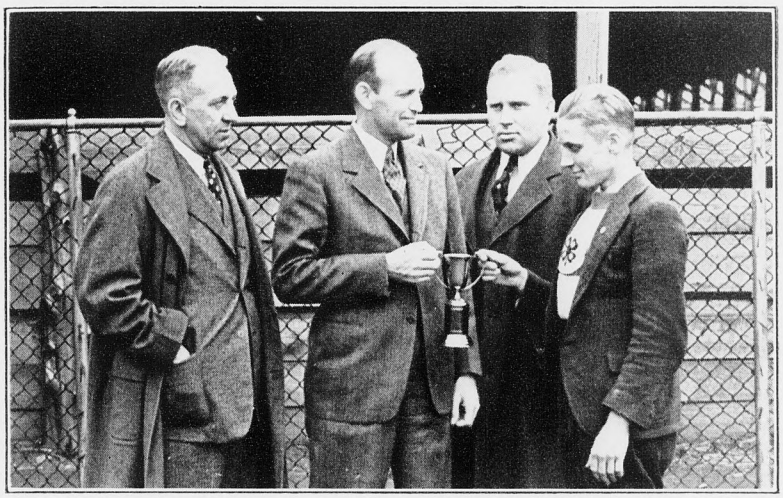


William Hare, 4-H Club member from Carroll County, receiving the trophy from J. C. Cash, President of the Union Stock Yards in Baltimore, for having the champion pen of lambs in the Western Lamb Show and Sale.

Lamb feeding was the basis of a special project this year. It is practically impossible to buy the right type of lambs at a reasonable price and at a time of year to meet the exhibit and sale attraction at the Baltimore Livestock Show. Feeding western lambs is being tried as a worthy project for 4-H club members. Three hundred and five lambs were purchased on the Omaha market to be distributed among 20 Maryland boys, fed out and sold at the Baltimore Stock Yards, the best fat lamb market in the country during January and February.

Colt club projects, in which six or more boys participated, expanded to seven counties in 1938. Maryland has an enthusiastic interest in a horse improvement program and 4-H club work is influencing its progress. In six years enrollment has increased from one member to 141. In 1938 there were 165 colts and horses fed and managed by 126 boys who completed their projects. Splendid exhibits in Washington, Frederick and Talbot Counties elicited enthusiastic comments. Boys

exhibited colts in Anne Arundel and Montgomery Counties for the first time.

Poultry—Economically, poultry ranks second to dairy in farm value in Maryland and projects in these fields held the same rank in 4-H club enterprises. The number enrolled was less, but the number completing projects increased and reports indicate that much better work is being done with larger and better flocks.

Other Projects—Market gardens, home gardens, corn, Irish potatoes, and tobacco received about the usual attention and there were only small changes in results compared with the last few years. A total of 761 members completed projects in these enterprises, nearly half of whom raised home gardens. Boys in Garrett County continued their excellent work in raising disease-free seed potatoes and the practice is interesting a few boys in other counties. The Maryland Tobacco Growers' Association continued its interest in 4-H club work and assisted boys from each of the tobacco-growing counties to attend Club Week at the University.

With a full-time specialist in forestry, interested in club work, the project made a fine start. Of the 63 members enrolled, 62 completed definite projects.

Electrical projects were completed by 73 boys, projects with small fruits by 23, sweet potatoes and various other projects, such as special crops, handicraft, rabbits, etc., together occupied the interest of and supplied education to nearly 300 club members.

Conservation projects, especially in wild life fields, increased considerably, largely as a result of the State Conservation 4-H Camp at Rocks, for operation of which $200 was donated by Charles Horn, president of the Federal Cartridge Company.

Club Week—Boys and girls from every county in the State gathered at the University from August 8 to 13 for the twentieth annual Club Week. The total enrolled, exclusive of local leaders, county agents and home demonstration agents, was 604.

In addition to the regular classes of instruction held throughout the week, outstanding speakers were secured for a number of special events. Much of the value of Club Week is derived from the events in which the boys and girls them-

selves have a prominent or leading part. This feature grows from year to year as the young people acquire ability and confidence to plan and carry out activities. Some of the inspirational and recreational events of the week included two campfires, three vesper services, a party, an older youth conference, and dinners by the local Kiwanis and Rotary Clubs for the All Stars.

Innovations that proved popular with the boys were classes in leather handicraft, good grooming, and improvement of posture.

National 4-H Club Camp—Maryland 4-H club boys were represented at the twelfth National 4-H Club Camp in Washington by James W. Davis of Harford County and Henry Koller of Carroll County. Both of these boys have been outstanding in club work and have made fine records in projects and leadership.

Fairs and Exhibits—The State fair at Timonium continued as a show window for dairy and several other types of 4-H club work. The dairy exhibit was approximately the same size as in recent years, but quality in some classes, particularly the Guernsey heifers and heifer calves, was better. Entry of twice the number of pigs shown in 1937 marked a definite uptrend in exhibiting swine. Twenty baby beef calves fed and exhibited by 4-H club members inaugurated the first baby beef show held in connection with the Timonium Fair.

A horse fitting and showing contest attracted teams from seven counties. Nine counties had teams in the dairy demonstration contest. The dairy cattle judging contest was up to its usual standard and 16 counties competed.

Teams from 15 counties competed in the judging contest conducted in connection with the Maryland Poultry Products Show. Evidence that the desire to achieve is greater than to win cash awards is found in the fact that as many teams entered this contest without the offer of cash awards as had entered in other contests where as much as $200 was offered in awards.

Through the cooperation of the Maryland State Fair Board it was possible to have classes for baby beeves shown by Maryland 4-H club members at the Baltimore Livestock Show. Nine counties were represented. Seventeen trios were entered in

the lamb show and 29 club members exhibited trios of fat hogs and a few single entries in the swine classes. Thirteen teams competed in the Fat Stock Judging Contest, and the 15 high-scoring boys in each type of livestock received liberal cash awards.

Maryland was represented in the cattle judging contest at the National Dairy Show by a team composed of Louis Merryman, Jr., Charles Hull, Jr., Page Ifert, and Charles Hammond, alternate. This team placed ninth in the contest. William King and Catherine Stiles placed fourth in the Eastern Section with their demonstration on the Production of Clean Milk.

A delegation of seven boys represented Maryland at the National 4-H Club Congress in Chicago.

The exhibits made by boys at a number of other fairs were notable, especially at the Hagerstown fair.

Older Youth—Largely due to the incentive created by a State Older Youth organization, the work with this group made considerable progress during the year. The plan provides for an operating older youth group, which cooperates and correlates its program with the active 4-H club groups.

The State organization, under the name of Senior 4-H Club Council, was officially set up in August, 1938. At present, sixteen organized counties have a total older youth enrollment of 640 members. Six of these counties were organized during the current year.

Cooperating Agencies—As in former years, the fine work being done by rural boys in their 4-H clubs enlisted the support of a number of agencies. The Agricultural Committee of the Maryland Bankers' Association, under the leadership of Judge Frank I. Duncan, again contributed substantially. With these funds as a nucleus, sums were secured from other sources, which enabled farm youth to increase their knowledge, widen their interests and strengthen their purpose of growing into worth while leadership and valuable lives.

Negro 4-H Club Work

The two Negro agents enrolled 999 boys and 282 girls—a total of 1,281 club members; 825 boys and 237 girls (1,062 members) carried projects.

One hundred and thirty club members and leaders attended the annual short course given at Princess Anne in August. Demonstration instruction was given in poultry, dairy, swine, gardening, crops, clothing, handicraft, foods, music and recreation. The boys made fly traps, tie racks and soap boxes to take home.

The assemblies and evening programs were excellent and the principal and staff of Princess Anne College rendered the best service the short course has yet received.

Local Agent, James F. Armstrong, was ill for months and was unable to complete his club work or make his final report. He was among the first extension workers appointed in Maryland and gave unselfish and untiring service to a large Negro population in Southern Maryland. Many Negro farmers have improved their farms and homes through his efforts and thousands of Negro youth have benefited by his advice and instruction.

AGRONOMY

WHILE the work in agronomy extended into many problems connected with crops and soils, the projects to which greatest attention was given were Soil Testing, Better Seed of Adapted Varieties, Hybrid Corn, Pasture Improvement, and Improved Crop Rotations. By virtue of cooperation with the Soil Conservation Service, extensive activities were carried on in the field of prevention and control of soil erosion.

Soil Testing—That this method for making definite recommendations for use of fertilizers and for soil management is being more and more appreciated by farmers is evident from the increasing number of samples submitted for test. During the year, 5,912 soil samples were tested in the laboratory and fertility recommendations were made for 993 fields representing 419 farms. The testing is done in the laboratories of the Experiment Station.

These tests together with knowledge of past history of the fields are proving a reliable basis for recommendations. They are enabling farmers to apply fertilizers and lime more intelligently and economically, and, in some cases, are helping them to avoid complete crop failure, especially with such crops as alfalfa and clover, where it is essential to have adequate lime for a successful crop.

Better Seed—In order that farmers may benefit by the improved varieties and strains of crops, and that they may grow the varieties best adapted to their conditions, it is necessary that seeds be made available at moderate prices. A program designed to render assistance in that problem, as well as to help control diseases, has become an established service.

The Extension Agronomist cooperated with the Maryland Seed Certification Board in providing reliable sources of seed. He assisted in locating good seed growers and advised them on ways and means for improving their seed. Lists of good sources of seed were prepared and supplied to farmers through the county agents.

Demonstrations in selecting good seed, especially in connection with fairs and exhibits of farm products, proved an effective method for encouraging greater efforts among growers. During the last few years, portable seed cleaning machines have been in operation in three counties and are doing a very effective job in purifying the seed and improving the quality of grain. About 50,000 bushels of small grain and clover seed are cleaned and treated each year by these machines. As a result of demonstrations, other counties are becoming interested in forming cooperative associations to purchase such equipment.

Hybrid Corn—Because of increasing interest in the growing of hybrid corn and the fact that some field corn hybrids have proved superior to open pollinated varieties in Experiment Station tests, a few demonstrations were conducted in 1938. It was the purpose to acquaint farmers with both the good and bad features associated with hybrid corn and to let them know that some hybrids are good, but that all good hybrids are not good under all conditions.

A field meeting was held at one of the demonstrations and a hybrid corn exhibit was prepared for the annual corn and grain show. It showed the method of developing hybrids, their advantages and disadvantages, and gave a record of their performance in Maryland. This exhibit will be loaned to county agents next year for use at county and community fairs.

Pasture Improvement—An increasing number of farmers are realizing the value of permanent pastures as the most economic source of feed and are recognizing the need for sys-

tematic improvement. Recommendations for improvement of 579 pastures were made by the county agents, and advice for 121 pastures was given in connection with the soil testing program.

Lespedeza is becoming increasingly important in some sections of the State and there was demand for information regarding that crop.

An extensive program for pasture improvement was planned and started and it will be a major project in 1939.

Crop Rotations—Maryland farmers, in general, have practiced good soil conserving rotations in the past, but, with modern developments in machinery, feed storage facilities, and methods for erosion prevention, many of the rotations can be improved. Although there was not an organized program for the specific purpose, considerable assistance was given in planning better rotations. Plans were made for a livestock feeding and home-grown feed program in 1939, with which improved rotations will be emphasized.

Cooperation With Federal Agencies—Soil conservation has made rapid strides, through the close cooperation between the Extension Service and the Soil Conservation Service. Both the Extension Agronomist and the Extension Soil Conservationist, who is a joint employee of the two agencies, contributed to the educational program that was carried out on a broad scale. The demonstration areas and camp areas served as a focus for tours and meetings that presented to hundreds of farmers the problems connected with soil erosion and the methods that have been found most effective in combatting it.

Passage of a Soil Conservation Districts Law by the Maryland General Assembly in 1937 opened the way for more intensive efforts. One such district was formed and other areas have petitioned the State Soil Conservation Board, which is the first step in that direction.

By means of exhibits at fairs and various kinds of shows, by moving pictures, by meetings, demonstrations, lectures, publications, and otherwise, the tremendous losses that are being caused by soil erosion were brought home to a large number of farmers throughout the State, especially in the sections where the problem is most acute. There is a realization of the importance of this problem, such as has never

existed before, farmers are ready and anxious to take active steps to stop the loss, and the demand for aid from the two Services becomes constantly greater.

As in former years, the program of the AAA was closely associated with the Extension agronomy program. The practices for which payments were made were, in most cases, practices which have been advocated for years. The two programs worked together to mutual advantage.

LIVESTOCK

A SOUND and substantial development in the livestock industry of Maryland has been in progress during the last few years and continued throughout 1938. The Extension Service, both through specialists and the agents in the respective counties, has contributed in many ways to this development and the demands for assistance and service have increased in line with the growing interest.

Looking to the development and success of the industry in future years, the work done with the youth of the State through 4-H club members is recognized as being among the most effective and important. Features of the work, such as the 4-H Livestock Leaders' Training School and the western lamb feeding project, have already been mentioned in connection with the activities of 4-H clubs. The fact that a Frederick County 4-H club boy owned, fitted and showed a two-year-old stallion that won championship honors at the Maryland State Fair at Timonium, the Frederick Fair, and the Hagerstown Fair is evidence of the quality and effectiveness of work being done with junior stockmen, and the ability they are displaying.

The demand for practical instruction in the management of livestock, including fitting and showing, resulted in holding a school on those subjects for the second year. It was planned for the breeders and herdsmen of the State to have a prominent part in the instruction and those attending were given an opportunity to mingle intimately with men who are actually using in their everyday work the methods they described. The psychological effect proved of value, as well as the practical information.

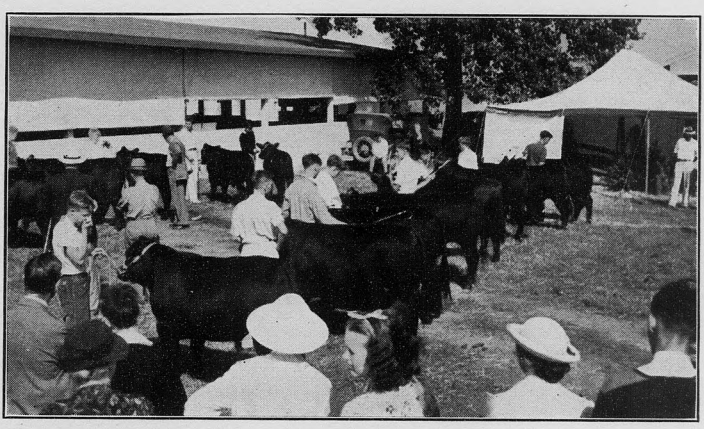
Horses—Acquisition of a dynamometer as a gift from the Maryland State Fair and Agricultural Society made possible

a number of horse pulling contests and demonstrations at fairs throughout the State and aroused a great deal of interest. They focused attention upon draft horses as a source of economic farm power in a way that could not be done in past years.

Special attention and assistance was given by the livestock specialist to the draft horse breeding programs in various sections of the State, particularly the Percheron breeders in Frederick County, the Southern Maryland Horse Breeders' Association, and the Washington County Belgian Breeders. A significant indication of the progress made by breeders in one section is found in the showing made at the Frederick Fair. Entries were limited to Maryland and this exhibit ranked eighth in number of registered Percheron horses in any one fair in the United States. A live breeders' association has set as its goal the making of the area "La Perché of America," and the progress made in the last few years, together with the progressive and cooperative attitude of the members of the association, give promise that their goal will be achieved.

A number of horse breeders were assisted in bringing outstanding breeding stallions and mares of both Belgian and Percheron breeding into the State.

Beef Cattle—A new feature in connection with the beef cattle work was a series of winter steer feeding and market-



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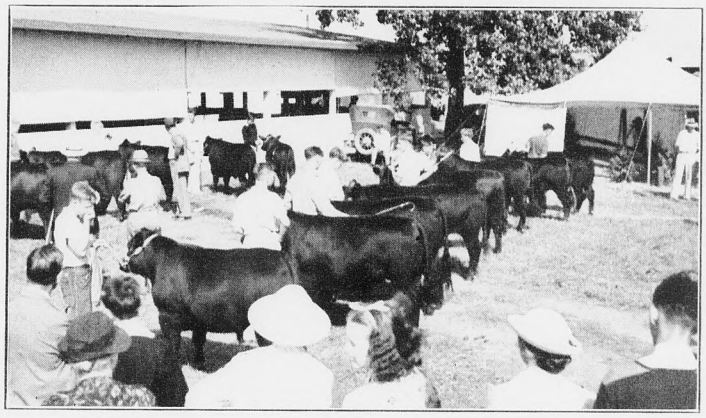

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ing meetings. The general plan was to hold three meetings about three or four weeks apart in each locality decided upon. At the first meeting, general steer feeding problems were discussed. The second meeting was devoted to marketing and various agencies, including the Stock Yards Company, the Commission firms, and the buyers, were represented and discussed their problems with the producers. Special research data were presented at the third meeting, with a view to driving home more forcefully a number of points brought out at the first meeting, and to answer some of the questions raised in the discussions. The meetings held to date were exceptionally well attended and it is evident that they are proving of interest and value.

Especially fine cooperation in other phases of the extension program was received from the Maryland Aberdeen-Angus and the Maryland Hereford Breeders' Associations. These organizations continued to grow in strength and numbers and their influence in building interest in the two breeds expanded proportionately. New herds are increasing rapidly and from all present indications there is still an unlimited market for breeding cattle in this eastern area.

What is considered a distinct accomplishment was made during the year through the cooperation of B. V. Flannery of Cockade Farms at Darlington, Maryland. A trade mark was secured for fine Maryland-bred and fed baby beef and it is now sold on the New York retail market under the name of "Maryangus."

Sheep and Swine—Assistance to sheep breeders and producers was principally a continuation of parasite control efforts through drenching and dipping, and meetings where feeding and management were discussed.

The growing interest in swine was evident from the increased number of 4-H club boys who made pig raising and feeding their project.

Practical assistance with many problems as they confronted farmers was given by the agents in the counties, but sufficient force was not available to carry out as extensive programs with sheep and swine as the value and importance of the two types of livestock justify.

Tours—Two tours conducted in cooperation with the Maryland Stockmen's Association were well attended and it was

evident additional tours would prove valuable as means for improving and promoting the development of the livestock industry.

DAIRY HUSBANDRY

THE dairy industry of the State suffered a distinct loss during the year in the death of Mr. I. W. Heaps, who had been an outstanding leader for many years. In the capacity of secretary-treasurer of the Maryland State Dairymen's Association, Mr. Heaps exerted a strong influence in building and developing that organization to its present position of value to the dairymen of the State. His forceful determination and his ability have been potent factors in behalf of the dairy industry.

The duties formerly carried by Mr. Heaps were assumed by Dr. R. W. Shermantine, who had served as president of the Association for a number of years. Due to his thorough understanding of the operation of the organization and the problems to be encountered, together with the fact that the Association had become so well established among the dairymen of Maryland, it has continued to render its usual service and to make progress.

The same close cooperation and cordial relations that have existed between the Extension Service and the dairy associations have been continued. The Service, including not only the dairy specialists, but also those in agronomy, economics, marketing, and other allied fields, as well as the representatives in the counties, have given assistance in their respective lines of work.

As a result of the effective cooperation through the years of the Extension Service, the three marketing organizations handling the bulk of Maryland milk—the Maryland Milk Producers, Inc., the Maryland-Virginia Milk Producers, and the Inter-State Milk Producers' Association—and the various breed associations, the dairy situation in the State has been much better than in many sections of the country. It is a tribute to the efforts of the dairymen through joining together themselves and utilizing the aid of extension workers.

Most of the assistance in connection with marketing during the last year has been in details, rather than in connection with major problems that were acute. The major activities carried

on by extension workers were in the line of improvement in quality, both of dairy stock and products. Economy in production went hand in hand with these activities.

Official Testing—The work which was known originally as "Advanced Registry Testing" has been divided in recent years into two types of testing. The first, known as Herd Improvement Testing, is a method of testing the whole herd, sometimes called mass testing. The second, which is still known as Advanced Registry Testing, is a selective method, whereby the breeder selects certain animals in his herd that he wishes to place on test.

On December 1, 1938, 87 breeders were testing 1,736 cows in both Advanced Registry and Herd Tests, compared with 76 breeders testing 1,449 cows the year before. The fact that the number of breeders and number of cows participating in this type of work has increased steadily and constantly during the ten years that the service has been available is evidence of its value to herd owners and their increasing appreciation of its value. During the last year there was an increase for all breeds testing except Jerseys, which remained about stationary. Included in the Advanced Registry Test were 29 Guernsey, 5 Jersey, and 8 Holstein breeders, testing 540 cows. The Herd Improvement Tests included 8 Ayrshire, 11 Guernsey, 17 Holstein, and 9 Jersey breeders, testing 1,196 cows.

Herd Improvement—Dairymen who were primarily interested in determining the producing ability of individual cows in their herds, rather than in establishing official records, were assisted by another type of testing. By joining Herd Improvement associations, the individual producers can have periodic tests made of their cows at comparatively nominal cost and are able to weed out the cows that are producing but little, if any, profit. More than 5,000 cows have been tested in this manner regularly each year for the last several years and two new associations were added in 1938.

A specialist of the Extension Service assists in providing testers for the Herd Improvement Associations, supervises their work, keeps records of production and other data pertaining to all cows entered, and supplies this information, together with advice on feeding and management, to members of the associations.

In addition to the very direct value to owners of definite knowledge regarding production of their cows, the information obtained through Herd Improvement Associations during the years the work has been in progress is a source of invaluable information regarding the dairy industry in the State and there is scarcely a dairyman who has not profited from it, at least indirectly.

Breed Associations—Active and aggressive breed organizations were responsible for much of the progress in the dairy industry. The association representing each of the four principal breeds of dairy cattle outlined a constructive program and in most cases carried out practically all the features of their programs. The field days, shows, fairs, sales, plans for promotion of 4-H club dairy work, and other events, provided excellent opportunity for services and cooperation by extension workers. Twelve field days and shows held during the year were attended by 3,550 people and 645 head of cattle were shown by 198 exhibitors. These annual events have proved effective in creating interest among the breeders and in giving them incentive to improve the type of their animals.

Purebred Sires—Further progress was made toward placing suitable sires at the head of Maryland dairy herds. The development of bull sales during the last few years has afforded excellent opportunity for those who must be supplied with sires from other than their own herds to obtain suitable animals. Not only has it been the aim of extension workers to actively encourage the use of purebred sires of good quality, but also to assist dairymen directly in locating and obtaining sires well adapted to their needs and to the improvement of their herds. This service has proved valuable to both the breeders who have bulls for sale, and the much larger number of dairymen who depend upon breeders for sires.

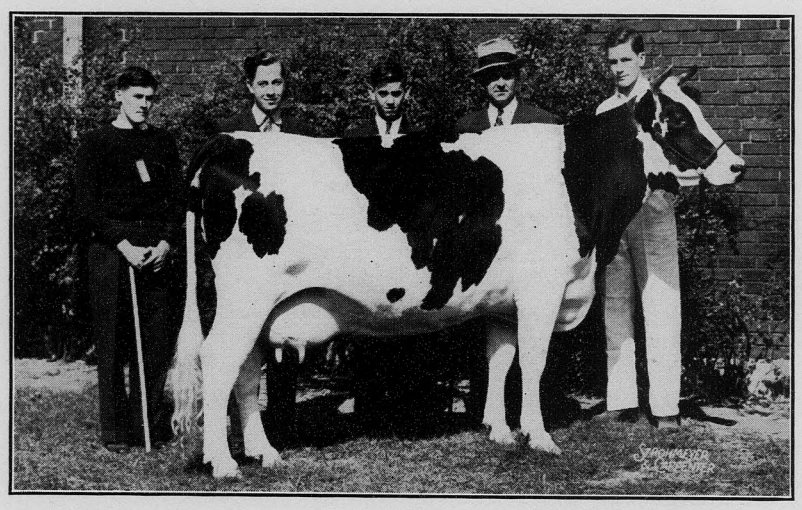
Improvement in Market Milk—Attention was required at times to problems of marketing the milk produced in certain sections of the State. In one case, producers were being shut off from their market because of unsanitary conditions and high bacteria count. Farm visits by county agents and specialists revealed that most of the trouble was due to a careless attitude toward small details on the part of the producer. In some instances, it was found that inspection had not been

made for six months, or more. This was corrected by letters to the dealer. Circular letters were sent to dairymen setting forth the necessity for looking after the small details in production of clean milk.

Dairy Herd Management—Educational work and demonstrations in the field of feeding and breeding of dairy cattle was a basic part of the extension program and had its place in many of the events that have been mentioned. Most of them furnished opportunities for bringing to the attention of dairymen in an effective manner the fundamental information essential to success in the industry.

As a recent development, considerable interest was shown by dairy farmers in the value and methods of making grass-legume silage. One specialist made a rather thorough study of the situation, including a survey of work done at experiment stations, analyses by the Department of Chemistry, and results obtained by those in Maryland who had tried this kind of silage. The information obtained was passed on to dairy farmers and further study is being given to the subject.

Dairy Judging Teams—While more definite information regarding the activities of 4-H dairy club members is given



Maryland 4-H Club dairy judging team that competed at the National Dairy Show. Left to right: Charles Hammond, Jr., (alternate); Charles Hull, Jr., Page Ifert, H. C. Barker, coach, and Louis McL. Merryman, Jr. The cow is Dunloggin Bessie Homestead, All-American 3-year-old in 1936.

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Bang's Disease—The vigorous campaign against Bang's disease carried on by the Livestock Sanitary Service was continued through the year. Extension workers contributed to this campaign by bringing to dairy farmers information regarding the disease and the situation with respect to having their herds tested.

FRUITS

CHANGES in many phases of the fruit industry can only be made somewhat gradually and for that reason extension work along a number of lines must necessarily continue through a period of years. The program was designed to deal with the more immediate problems and also to achieve progress in the more fundamental problems of longer duration.

Tree Fruits—Pruning, fertilization, thinning, removal of unprofitable and weak trees, fruit pollination, and other factors in profitable production continued to receive attention, but added emphasis was placed on soil conservation. The summer field meeting of fruit growers featured a visit to a terraced orchard and discussions of soil conservation work as applied to fruit growing. By means of a special pamphlet outlining recommended soil improvement practices, and the rates of payment that could be earned by carrying out such practices under the AAA program, practically all fruit growers were informed of the advantages of cooperating in the soil conservation plan. The specialist reports that in some counties of Maryland practically every orchardist is participating in the program and that there is a noticeable improvement in soil management practices.

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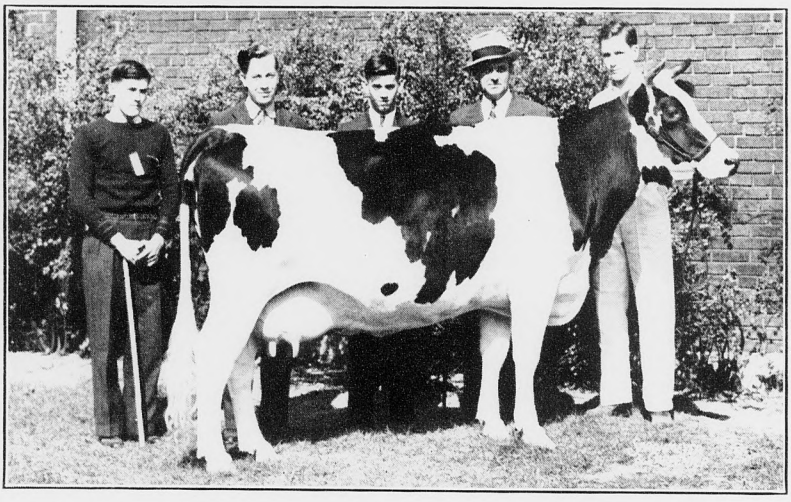

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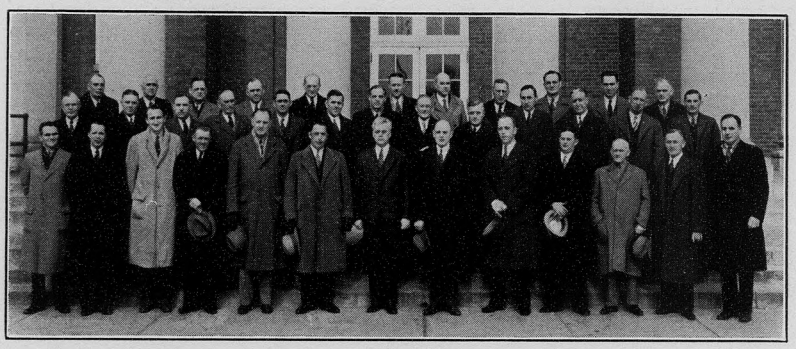
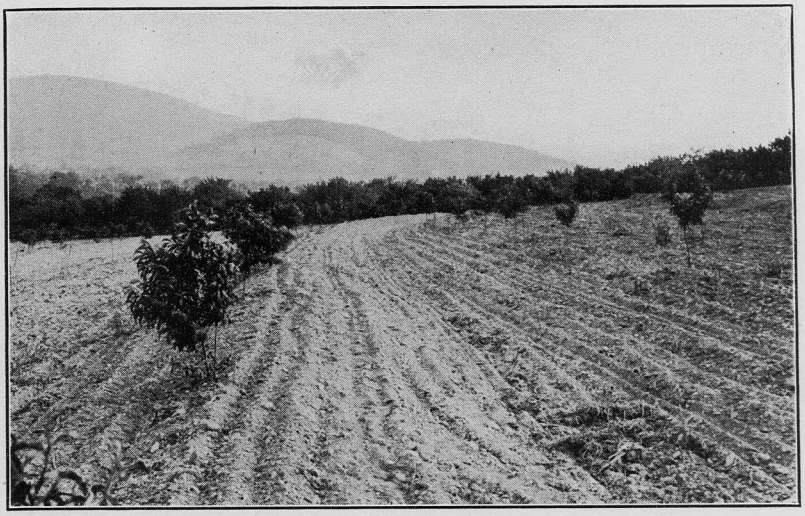
There has been great interest in newer varieties of fruit, as some of the older peach and apple orchards are being slowly replaced by new plantings. This interest was reflected in increased demand for information regarding new varieties.



Leaders in all lines of Horticulture constitute a State Advisory Council for work in those lines.

Handling Fruit at Harvest—Following a packing house survey made a few years ago, a drive was launched against careless handling of fruit at picking and packing time. By means of news letters, publicity in the press, and special signs for display in packing houses, the growers and packing house help were made more conscious of the great losses that occur as the fruit is made ready for marketing. This effort attracted wide attention and inquiries came from several distant states asking for samples of material used.

Apple Advertising—The program for advertising apples of this region, in which Maryland growers have joined with growers from neighboring states, was continued in 1938. The plan has been effective in moving apples through the markets, the greatest weakness thus far being found in the fact that it has not been supported by all growers in the area, and that the pack and grade of the apples in the area are not more uniform and of higher quality. It is believed, however, that bringing growers together into a movement of this character to improve the marketing of their product will result in better grading and packing, as well as other improved methods in marketing and distribution.



A terraced orchard on the farm of Gardenhour Brothers near Smithsburg, with peach trees planted on the contour. The summer meeting of the State Horticultural Society was held at this farm.

Raspberries—For many years the large raspberry producing section of Western Maryland has had a number of unsolved problems. Distinct progress is being made in serving those interested in production of that crop.

Two years ago some land was donated for use of the Experiment Station and Extension Service and cooperatively a planting was made of all available varieties of red and black raspberries. Results of spraying, use of nitrogen fertilizer, and yields of the newer varieties compared with the older ones have made a real impression upon the growers. A field meeting and an indoors meeting were the first raspberry growers' meetings ever held in Maryland. Not only have these meetings and the plots brought extension work into new grower contacts, but the interest of growers from other states has brought them to view the plots from time to time.

A pamphlet on raspberry growing proved of value.

ORNAMENTAL AND VEGETABLE GARDENING

THE desire of people generally to improve and beautify their surroundings is distinctly apparent from the demands made upon the specialists and agents for help in that line. Records naturally reveal only a part of the actual accom-

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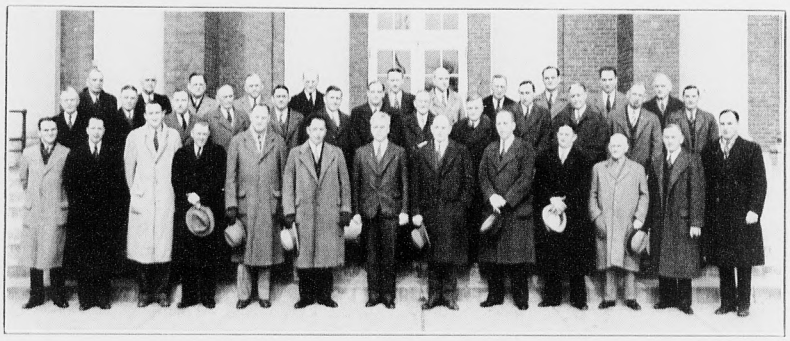

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plishments, as such activity spreads rapidly from home to home and throughout a community.

Reports from agents indicate that 3,235 persons made some improvements to home grounds during the year, largely as the result of a ten-point program of the Extension Service. Many special activities were reported by clubs, such as conducting a flower mart, flower exchange, garden tours, garden schools, nature study, exhibits, and making Christmas decorations.

Assistance in Planning—Requests for definite assistance in landscape planning continue to exceed facilities available. A total of 126 such requests was received, of which 64 were for home grounds, 30 for school grounds, and 32 were of a miscellaneous nature. Ninety-two landscape plans were prepared and 104 persons or organizations were advised regarding landscape problems.

Vegetable Gardens—Special effort was made to interest and encourage boys and girls in production of home gardens. Local leaders of 4-H clubs cooperated in the work and 725 members of clubs were enrolled. While not as large a number as last year, the projects carried out by juniors were of great value both from the standpoint of education and experience and the contribution to the family living.

Home garden work, as in past years, was an important activity of the colored workers in connection with the encouragement of production of food for home use. Reports show that 481 adults carried on home garden work, with a total of 1,233 acres.

Variety Demonstrations—In order to determine and demonstrate the adaptation and market value of new types of vegetables, as compared with the standard commercial varieties, a number of tests were conducted on the Eastern Shore.

These included 11 varieties of snap beans, 16 of cucumbers, 11 of watermelons (including wilt-resistant types), 13 of cantaloupes, 8 of large podded lima beans, 6 of sweet potatoes, 12 of peppers, and 29 strains of tomatoes. Excessive rains late in July made the season unfavorable for tomatoes, peppers and beans, and records of yields of these crops were of no great value, but the project as a whole proved very helpful to those interested in vegetable production.

Cooperation in Federal Programs—Much of the time of one specialist was devoted to various programs conducted in Maryland by various Federal agencies. Assistance was given in development of State parks and monuments as a part of the CCC program. A number of WPA projects embracing landscape developments of parks, school grounds and military posts were prepared and supervised. As part of the County Program Planning project sponsored by Federal agencies, land-use maps were secured from 14 counties. Aid was given in preparing a report for Maryland in connection with the nation-wide recreational survey conducted by the National Park Service.

Other miscellaneous activities included work in improvement of the University campus incident to the building program, organization and supervision of exhibits at the annual winter farm products show and the outdoor life show, and handling the affairs of the Maryland Vegetable Growers' Association.

MARKETING

ANY program that is to deal at all adequately with the farm problems in Maryland must provide for a serious effort to improve the conditions and methods prevalent in marketing the crops which the land produces. There is need for as much cooperative action and as intelligent planning for the merchandising and distributing of farm commodities as for their production. In spite of the fact that the attention has not been given to marketing problems that they deserve, decided progress has been made.

For a number of years the activities of the Extension Service in the field of marketing have given major attention to improvement in quality of the products offered for sale, and to better grading and standardization of farm commodities. That this program has proved effective is evident from the constantly increasing interest in standardized products and the demands for services of various types in that line.

Inspection Service—The educational and demonstrational program is so closely integrated with the activities of the State Department of Markets that there is no distinct line of demarkation. In the process of inspecting products it is the aim to also demonstrate to growers the factors which deter-

mine quality and the requirements for established grades. Every effort is made to aid growers in their packing, so that their products will meet grade requirements.

During 1938, farm commodities with a value of approximately $1,554,038.80 were inspected. They were divided among the several products as follows: Apples, $511,380; Peaches, $71,400; Tomatoes, $108,350; Potatoes, $281,360.80; Sweet Potatoes, $29,700; Cannery Tomatoes, $155,890; Cannery Peas, $35,925; Cannery Corn, $63,000; Eggs, $286,150.80; Poultry, $10,882.20.

Owing to extremely dry weather just before harvesting season, the general quality of strawberries was such that shippers decided not to use the service.

Canning Crops—There has been a growing desire to arrive at a satisfactory basis for the purchase of raw stock of canning crops on the basis of established grades. In line with this desire, considerable work has been done with cannery tomatoes, peas and corn during the last few years and progress is being made. Efforts to develop accurate and reliable methods for determining the quality of raw peas were continued and have reached a point that two canners used the tenderometer method and one used the brine flotation method. In all, six canners used the inspection service in one way or another. Two based the price of peas to the farmers on the results of the graded product, while the remainder used the service as a guide in preparing future contracts, or to avoid mixing peas of a known low grade with those of higher quality, which would relegate the entire lot to the lower grade.

Sixteen tomato canners used the grading service and there was an increase in the total quantity of tomatoes graded. All but four of the canners paid the growers for the raw stock on the basis of graded product and two made it optional with growers to pay at the prevailing price of the day or the graded basis.

Cannery corn was graded at five plants owned by four canners. The number was not as large as in some years, but two of those using the service had not done so before.

Eggs and Poultry—Service in connection with eggs has developed into a number of types to meet varying conditions with respect to marketing, but the demand continues to grow

continuously. For the period of December, 1937, to November, 1938, inspection was provided at the Purity Creamery Company in Baltimore for 449,388 dozens of eggs, and at Joseph Atkin, Inc., in Washington, D. C., 243,163 dozens of eggs were graded and packed under certificates of quality.

Another form of service included the inspection of graded lots of eggs for contractors. Consuming institutions in most cases required inspection of these lots. The dealers, however, had their eggs inspected in many cases so that there would be no question on the part of the consumer as to receiving the grade of eggs bought. This service is proving popular, as it assures consuming institutions that they receive the grade of eggs they buy, and contractors know that competitors cannot resort to loose grading.

Applicants are relying on the service more and more and accepting decisions of inspectors as accurate and final. There is sentiment in some parts of the State for Federal-State grading stations located at rural points. The Southern States Marketing Cooperative is pioneering in this field and opened its first station at Bel Air. In all probability there will be several more opened during the coming year.

Purchase of Surplus Commodities—In the purchase of a number of Maryland farm commodities by the Federal Surplus Commodities Corporation, the inspection service not only provided the necessary inspection, but also acted as receiving agent and cooperated in other ways. At various times during the year considerable quantities of apples, potatoes and sweet potatoes were purchased. All such products were required to be of specified grades and quality and the service rendered by trained inspectors was essential to enable growers to take advantage of the opportunity for disposing of their products.

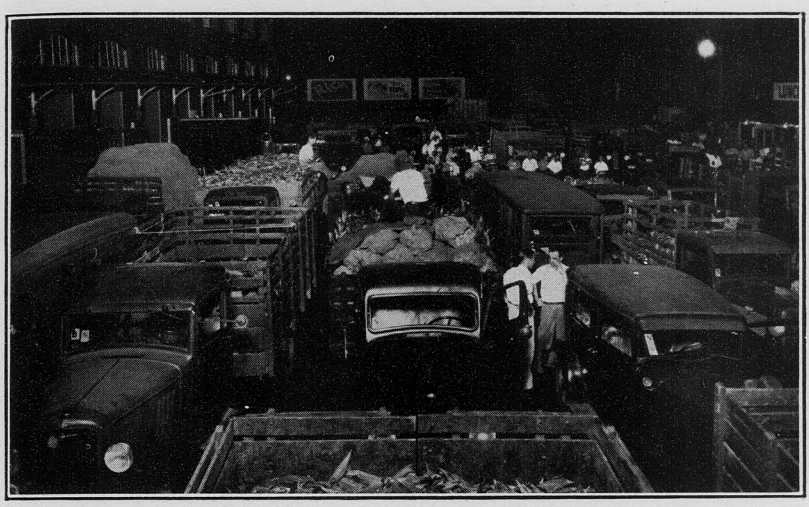
Cantaloupe Regulation—Inspection of cantaloupes for maturity, as provided by Maryland law, was conducted for the sixth consecutive year. Growers are now sufficiently familiar with the requirements of the law and the methods of determining maturity so that the educational field demonstrations of past years were not felt necessary. During the harvesting season, however, field demonstrations were held whenever in the opinion of th inspector it was desirable, or requested by the growers. Better cooperation was experienced this year, both from growers and buyers.

Cooperation With Marketing Associations—A wide variety of assistance and service is rendered each year to the various organizations that are active in the marketing of Maryland farm products. Close contact is maintained by the specialists with all such organizations and definite projects are arranged on a cooperative basis from time to time. Always the specialists are available in advisory capacity and prepared to obtain specific information needed or desired by those active in operating the marketing organizations. Assistance was given the Eastern Livestock Cooperative Marketing Association in obtaining adequate market news service; arrangements were perfected in cooperation with the Federal Bureau of Agricultural Economics for inspection and certification of eggs at stations of the Southern States Cooperative, Inc.; plans were made to assist the Hillsboro-Queen Anne Cooperative in connection with green wrapped tomatoes, but the activity had to be postponed. In like manner, other commodity organizations were assisted with problems as they were confronted by them.

Seed Certification—As the certifying agency for the Maryland Seed Certification Board, 290 bushels of seed potatoes and 665 pounds of Marglobe tomato seed were officially certified. By a plan which has been in operation for a number of years, the specialists in various lines make the necessary inspections of crops and seeds and, if found eligible for certification, the grower may have his products officially sealed and certified. This service has been particularly effective in the improvement of potato, sweet potato, tomato and wheat seed. It provides not only seed that is of known origin, but also seed that is free from disease and true to type.

Improvement of Terminal Markets—Considerable attention has been given to improvement of conditions on the terminal markets to which a large portion of some Maryland farm products are sent. Conditions on the Baltimore and Philadelphia markets are extremely out-of-date and unsatisfactory, and growers have made repeated complaints.

In cooperation with the department of Agricultural Economics of the University of Maryland, a survey was made of the market situation in Baltimore and several suggested plans for improvement in the physical marketing facilities were evolved. The results of this survey and the suggested



Conditions like this on the markets to which Maryland growers send large volumes of produce constitute one of the important problems in the way of better marketing facilities.

plans were presented to representative truck growers and at meetings of the Farm Bureau and Grange. While it cannot be said that specific progress has been made, it is hoped that the first steps have been taken toward improvement in the present deplorable conditions, and that it will prove beneficial not only to the growers, but also to receivers and distributors.

Maryland has participated also in the joint activities between a number of states and the Federal Government designed to improve the physical facilities for marketing farm products in the city of Philadelphia.

POULTRY

INCREASED personnel made it possible to considerably expand the poultry extension work, especially in some of its phases. Most of the main objectives were the same as in recent years, but greater emphasis was given to some of the broad problems of vital importance in development of the industry.

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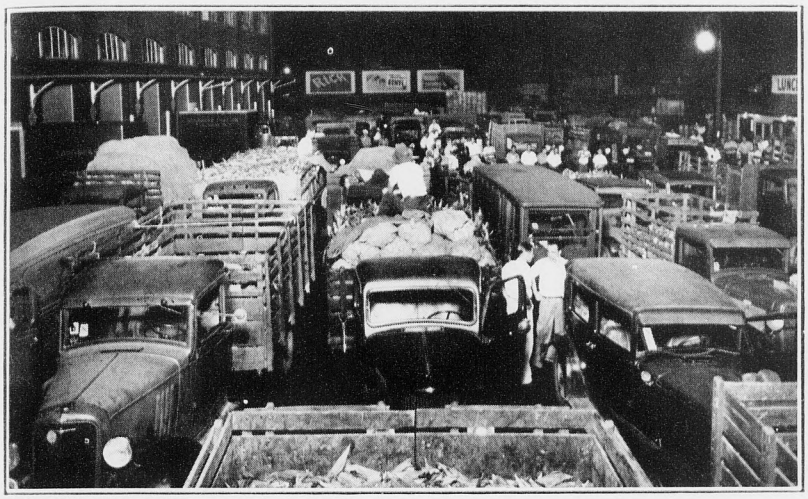

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been accomplished in the last few years. The Extension Service has rendered assistance in this development and contributed more in 1938 than in former years. Four new county poultry associations were formed in the past year and are active in educational and promotional work.

The Maryland Egg Producers' Cooperative at Hyattsville reports marketing of more than 10,000 cases of eggs and the purchase of about $85,000 worth of feed and supplies at an estimated saving to members of about $20,000.

The Maryland Turkey Producers' Association, organized early in the year, has developed a plan for improving the marketing of Maryland turkeys which was tried successfully on a small scale in 1938.

The organizations affiliated with the Maryland State Poultry Council now number 10 County Poultry Associations, 1 cooperative, and 2 State-wide commodity organizations. Extension workers have taken active parts in the development and operation of the State Poultry Council, which organization is establishing a fine record of achievements in behalf of the industry in the State and in cooperation with other states in this region.

Seventh World's Poultry Congress—Plans for participation in this world event have required a great deal of attention. In addition to plans and preparation for the Congress at Cleveland, the fact that the University of Maryland is the only Land-Grant institution to which foreign delegates will make an official visit offers another opportunity and obligation. In cooperation with the poultry organizations and interests of the State, and with other divisions of the University, an appropriate event is being arranged.

Members of the Extension force have been active on practically all committees charged with arranging for Maryland's participation in the World's Poultry Congress. With a view to taking full advantage of the educational opportunities afforded, the Maryland plan provides for sending a large number of boys and girls from all parts of the State to the Congress in Cleveland.

Farm Egg Record Project—This project has been in operation for nine years and has proved an effective means of encouraging sound practices and eliminating some of the great-

est losses. The results are enhanced in value as the period over which they were obtained is increased.

A comparison of results shows that in 1938 complete reports on their flocks were submitted by 65 producers. They averaged 327 birds each, laid an average of 157 eggs per bird, sustained an average mortality loss of 18.1 percent, and a culling loss of 42.8 percent of the birds which started the year. The record for the nine years shows 73 producers reporting on flocks that averaged 315 birds each, that laid an average of 151 eggs per bird, sustained an average mortality loss of 17.7 percent and a culling loss of 37.9 percent of the birds starting the year.

These figures point out the very important fact that Maryland poultrymen under present conditions find it necessary to replace about 55 percent of their flocks annually. That is an expensive process and emphasizes the great need for better bred stock and better management in order to reduce mortality and culling, as well as to increase average egg production per bird.

Poultry Improvement—Each year finds the work better organized and more effective in carrying out the Maryland Poultry Improvement Plan. One specialist of the Service devoted the major part of his time to assistance in this program and others contributed substantially.

Eight breed improvement schools were held for the purpose of training flock-selecting agents to cull hatchery breeding flocks, and 137 flock owners qualified. The number of hatcheries participating in the program increased slightly and the hatching capacity of those participating increased 49.48 percent.

There was very little increase in the number of breeders participating in R. O. P. work, but the number of birds qualifying and the quality of the birds as to body weight, egg weight, and number of eggs laid increased materially over last year.

Quality Egg Program—The Maryland Poultry Products Show, held annually in Baltimore under auspices of the Extension Service, the State Poultry Council and Farm Bureau, has had an important part in focusing attention of producers, dealers and consumers on the value of quality in eggs. This

Show increased in scope and educational value and has become an outstanding event for the poultry industry.

The first Poultry Products Marketing School, held at the University of Maryland and attended by about 35 Maryland producers and market men, proved an important step in training people in various branches of the industry in improved market methods and practices.

Cooperation with industry organizations, chain drug stores and distributors in egg quality control and consumption drives showed gratifying results. An increasing number of producers are handling their eggs more carefully and with greater dispatch under better organized and more profitable marketing systems. These activities, together with consumer drives by two chains of drug stores to encourage greater consumption of eggs, proved effective as means for increasing the outlet for eggs of good quality.

Turkey Improvement—The plans for improvement already mentioned have extended to the turkey growers. Several turkey breeders are successfully cooperating in official breeding work, which with the tendency toward commercial hatchery production of poults will aid in keeping this phase of the poultry industry upon a sound basis.

ENTOMOLOGY

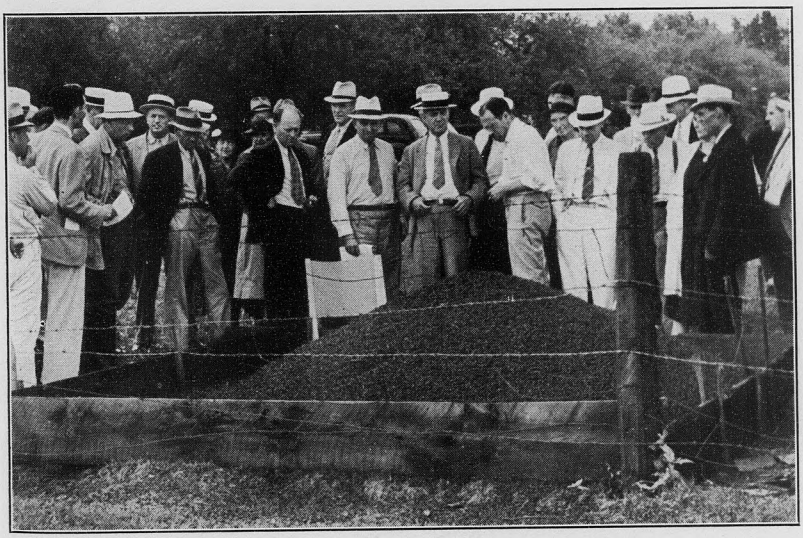
INSECT control activities of the Extension Service are conducted in close correlation with the work of the State Entomologist, who functions under the State Horticultural Department. The teaching, research, regulatory and extension are all organized under one head.

Spray Service—Through this service, which has been in operation for a number of years, fruit growers are not only advised as to the best kinds and amounts of materials to apply and methods of application, but are also kept informed as to the development of insect pests and most effective time to spray. During January and February, spray calendars are prepared and distributed to growers. At the same time, spray cards dealing with each individual spray are sent to each county agent with instructions that they are to be held until notices for their release are received. Records on the emergence of codling moths in different sections of the State were

obtained and growers were kept posted on the activities of insects and diseases by letters, newspaper articles, and personal visits from specialists. Information was supplied also on the pre-harvest condition of fruit, enabling growers to have poison removed if the percentage was too high.

Pea Aphis—Based on conditions in 1937, an outbreak of pea aphis in 1938 was predicted, and was further confirmed by finding pea aphis present in alfalfa fields early in the season. A campaign was started early in the year to arouse growers to the seriousness of the pest and to furnish accurate information on its control. By the time the aphis had appeared in the pea fields in numbers large enough to justify spraying, practically every large grower was equipped to start operation. The data obtained indicate this million dollar crop was saved from what might have been a complete loss.

Japanese Beetle—An extensive campaign was conducted, involving demonstrations of practically all methods that gave promise in controlling or retarding the Japanese beetle. Approximately 40,000 traps were set up over the State, mostly in the heavily infested areas, and 615.85 barrels of beetles were caught. A number of demonstrations were held on spraying to



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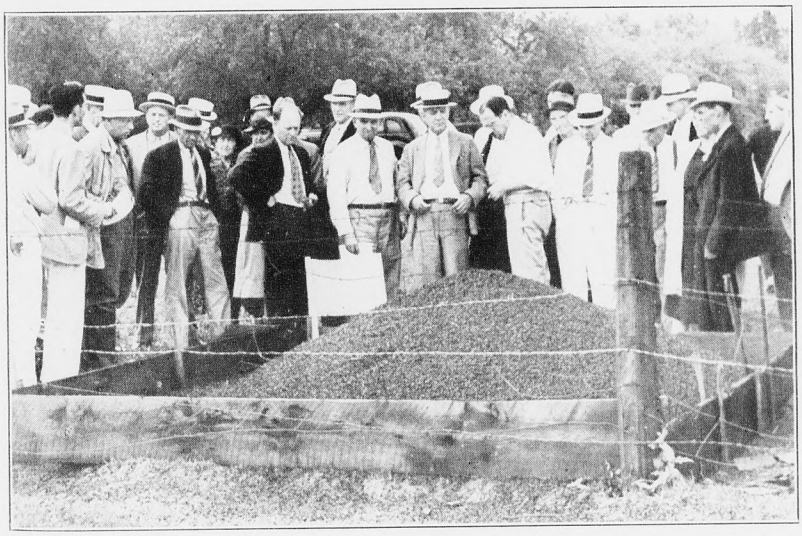

A pile of Japanese beetles, estimated to contain about 40 bushels, on the farm of Julian Spry, near Elkton, seen on the Japanese beetle tour.

One method used in destroying Japanese beetles caught in traps. This picture was made on the farm of Carl W. Feucht. He averaged about six bushels of beetles a day from his 88 traps, collected them in metal barrels on a small sled, and killed them by stewing over a fire of corn cobs.

repel the beetles on shade and apple trees and on asparagus. Use of repellant dusts on sweet corn and soybeans was demonstrated. In cooperation with the Federal Bureau of Entomology and Plant Quarantines, 364 colonies of parasites were liberated in nine counties. Demonstrational tests were made to determine varieties to use and dates for planting under conditions of heavy Japanese beetle infestation.

In addition to lectures, demonstrations and exhibits, information was disseminated through distribution of 80,000 circulars.

Mosquito Control—The program planned for mosquito control was not fully carried out, due to the closing on June 1 of the CCC camp engaged in the work. Only about 90% of the tidal marshes in the area were ditched. As nearly as can be determined, the public feels that the anti-mosquito work has been decidedly beneficial in the reduction of mosquitoes, and those who are interested in muskrat farming and whose marshes were ditched or diked are uniformly agreed that the system adopted in performing this work has been satisfactory and not detrimental to the muskrat industry.

Pests of Canning Crops—In addition to the attention given each year to some of the more serious insect pests of canning crops, such as the Colorado potato beetle on tomatoes and the Mexican bean beetle, there are requests for information on control of a number of other insects. Among those during the last year were cucumber beetle, squash bug, squash vine borer, pickle worm, asparagus beetle, bean aphid, aphids on cucumbers, etc.

Pests of Field Crops—Control of the insect pests of the potato crop is an important factor in the success of growers of that crop. An effective program of spraying to control insects and diseases has been formulated, which is demonstrated each year, together with promising new materials. Field days are held at which potato growers are shown the results.

During 1937, the tobacco horn worm proved a serious menace to that crop. Methods of control were developed and demonstrated in 1938 which were so successful that some of the farmers felt that the tobacco horn worm would be eliminated if all tobacco growers would practice them.

The situation with respect to Hession fly infestations is watched closely and growers are urged to plant wheat at safe sowing dates.

There are many insect pests of various field crops that are not considered of major importance. However, each year there are outbreaks of one or more of these pests and efforts are required for their control. Among the more serious of these were flea beetles on tobacco, potatoes and corn, spittle bugs, army worms, wireworms, cutworms, and the corn ear worm.

Insects of Nurseries and Greenhouses—Visits each year to nurseries and floral establishments in connection with inspection and regulatory work affords the specialists an excellent opportunity for learning the insect problems of this group of growers and for demonstrations and advice on control. They have come to look to the department for help in all such problems. Information regarding pests of this type was also distributed by mimeographed materials and through the press.

Garden Pests—The demand by garden clubs for information on control of pests of flowers, ornamentals and shade trees was met in large measure by the staff engaged in Japanese

One method used in destroying Japanese beetles caught in traps. This picture was made on the farm of Carl W. Feucht. He averaged about six bushels of beetles a day from his 88 traps, collected them in metal barrels on a small sled, and killed them by stewing over a fire of corn cobs.

repel the beetles on shade and apple trees and on asparagus. Use of repellant dusts on sweet corn and soybeans was demonstrated. In cooperation with the Federal Bureau of Entomology and Plant Quarantines, 364 colonies of parasites were liberated in nine counties. Demonstrational tests were made to determine varieties to use and dates for planting under conditions of heavy Japanese beetle infestation.

In addition to lectures, demonstrations and exhibits, information was disseminated through distribution of 80,000 circulars.

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beetle work. By emphasizing the Japanese beetle work, that program was carried forward and at the same time it was possible to furnish specific information on other pests.

Pests of Buildings—Termites, powder post beetles and other insects affecting timbers in buildings called for a large amount of individual service, which was considerably reduced by issuing a circular on termites that had wide distribution.

Miscellaneous Insects—Providing information in response to specific requests is by no means a small part of the service. A great many letters were received, accompanied by specimens of insects and insect injuries, with requests for information on control. They were identified and letters were sent giving the life history of the insect and advice on control methods. In some cases it was necessary to make personal visits before advice could be given.

APICULTURE

WHILE a somewhat wide variety of service and assistance was rendered to the beekeepers of the State, it was centered quite largely in five major projects.

Beginners' Schools—Three such schools were conducted, at Easton, Denton and College Park, for the purpose of inculcating a knowledge of the essentials of bee biology (the foundation upon which all successful systems of colony manipulation must be based), and to teach the fundamentals of apiary management. These schools met three times a week for six weeks and proved to be an effective method of extension teaching.

Bee Clinics—Because of the known prevalence of American Foulbrood in ten counties and in the absence of an adequate apiary inspection service, an attempt was made to teach the diagnosis and control of the disease to as many beekeepers as possible, so that they might temporarily act as their own inspectors. For that purpose, 45 bee clinics were held throughout the State.

A clinic consisted of samples of diseased brood combs showing all stages of the disease and a competent teacher to point out diagnostic characteristics. A feature of these clinics was the personal manner in which they were conducted, each bee-

keeper receiving individual instruction. It is estimated that at least 500 went through the clinic.

Permanent Pollination Plan—The foundation was laid for a plan designed to secure lasting contact between beekeepers and fruit growers. With this preliminary work done, it is believed that a pollination service may be started in 1939, whereby a file will be kept up-to-date,listing the current needs of fruit growers and the names of beekeepers who are in position to supply those needs.

Fair Set-Up Expanded—Realizing the importance of securing more advertising for honey and also the need for teaching the better packaging of bee products, an effort was made to increase and expand the exhibits made in that line. A number of fairs and exhibits added bee products to their list and others expanded their exhibits in that line, both in premiums and space.

Organization—New chapters of the Maryland State Beekeepers' Association were formed in five locations. The annual meeting at Frederick, featuring nationally known leaders in bee culture and lobby exhibits, was considered the finest beekeepers' meeting ever held in the State.

PLANT PATHOLOGY

THE loss caused by one or more plant diseases often represents the difference between a profit or a loss from the production of a crop. Efforts are being made constantly to discover more effective and efficient methods for controlling or eradicating the most serious plant diseases. As progress is made in that line by research workers, the Extension Service is bringing the methods to the attention of growers as rapidly as possible.

Certain disease control practices are of such character that they must be made a regular part of the crop production procedure. In other cases, it is necessary to conduct more or less intensive campaigns for a period, with a view to preventting or controlling an especially serious outbreak of diseases, or in the attempt to eradicate a disease. Considering the exceptionally wide variety of plants and crops grown in Maryland, the reduction of loss by diseases is a complex problem

and involves assistance of many types and in many lines. Only some of the work done to protect the more important types of crops can be mentioned here.

Diseases of Potatoes—During the last two years the valuable potato industry of the State (approximately an annual value of $3,000,000) has been threatened by the late blight disease. In 1938, losses from this disease were estimated at 25% of the crop. The value of spraying the potato crop for control of the disease and the use of blight-resistant varieties were demonstrated in different parts of the State and efforts were made to induce growers to follow the control practices as generally as possible. The use of blight-resistant varieties could not yet be adopted generally because of insufficient seed. Such varieties are being grown under supervision of the Extension Service and will soon be available for general distribution.

A demonstration on the control of virus diseases by tuber unit planting was conducted in Garrett County, and the assistance in production and certification of disease free seed carried on for a number of years was continued. In 1938, 27,087 bushels of potatoes grown on 249 acres by 76 growers were eligible for certification.

The work done by 4-H club boys has been an effective factor in disease control and improvement of seed potatoes. Twenty boys had potato production projects and demonstrated the value of planting certified seed and spraying the crop.

Diseases of Orchard Crops—A spray service provided cooperatively by specialists in plant diseases, insect control and horticulture has been in operation for a number of years and is now depended upon by the majority of commercial orchardists as a guide in their spraying programs. Specialists make studies of the disease development in orchards throughout the State and issue information and advice regarding the most effective time to spray and the best materials to use. This information is brought to the attention of orchardists promptly and at the time the work should be done through the offices of county agents.

A spraying demonstration conducted in Howard County indicated that the spray schedule recommended by the Extension Service for control of both diseases and insects gives satisfactory results.

Diseases of Cereal Crops—Many of the methods that are most practical for control of diseases of cereal crops are closely allied with farm management and agronomy problems. Careful seed selection, proper storage conditions, correct fertilization, and crop rotation were recommended and demonstrated as methods for controlling corn diseases. Treatment with mercury compounds was the method recommended for control of diseases of small grains, and farmers were advised to have their seed grain cleaned and treated by machines for that purpose, wherever such machines were located at convenient distances.

Diseases of Tobacco—There was a reduction in the farm value of the tobacco crop for 1937 of more than $1,700,000 due in large measure to serious injury or destruction of plants by blue mold disease in the spring. With the cooperation of the U. S. Department of Agriculture and commercial chemical companies, 16 demonstrations were conducted on the control of tobacco blue mold. These demonstrations showed that losses from the disease could be minimized by the spray treatment and that the disease could be cured by the gas treatment.

Diseases of Peas—Through the efforts of the Service over approximately twenty years, some of the most difficult problems of growers of peas for canning have been greatly simplified. Most of the pea growers are now following instructions of the Service in the use of wilt-resistant varieties, some of which have been developed by the Maryland Experiment Station. Three-year rotations are becoming general practice for control of root rot, in place of the old practice of growing peas year after year for as long as six or seven consecutive years on the same land.

Diseases of Strawberries—The strawberry industry, which has an annual farm value of approximately $1,500,000, has been threatened by a new disease, known as red stele. Assistance was given growers in recognizing this disease and the fields of dealers in strawberry plants were inspected. Distribution and sale of strawberry plants from diseased fields were prohibited.

Diseases of Sweet Potatoes—This crop is quite important in a localized area and efforts to improve the yield and quality

were continued. Practices that were demonstrated as effective in control of disease included use of disease-free seed, treatment of seed, seed bed sanitation, plant treatment, and crop rotation. Certification of sweet potato seed was continued and 6,000 bushels, grown by 7 growers on 27 acres were eligible for certification.

Diseases of Other Crops—Some of the control measures demonstrated for diseases of other crops were: Use of Western grown seed for control of bean diseases; use of yellows-resistant cabbage; use of varieties of watermelons resistant to wilt; spraying cucumbers and cantaloupes to control disease; weed control and roguing for control of cucumber mosaic; and, use of wilt-resistant varieties of tomatoes.

FORESTRY

FARM management plans are directing the attention of farmers to their woodlots as a source of additional revenue. Many farmers are becoming conscious of the possibilities of their woodlands and are seeking advice and help. As an example, the records show that 13 farmers who harvested timber from 1,094 acres according to forestry principles realized increased stumpage prices ranging from 50% to 100% more than was possible under former methods. Since many small sawlog trees were left unharvested, it is estimated that the growth added to these trees during the next 20 to 30 years will justify a second cutting.

Such agencies as the Soil Conservation Service and the Civilian Conservation Corps have with increasing effectiveness continued to extend interest in forestry through demonstrations. A greater number of farmers were reached and helped in forestry problems in 1938 than in any previous year.

Thinning of young stands of timber to accelerate rate of growth on the more desirable trees is becoming more prevalent. Thirty-three farmers used this method for improving 182 acres of forests.

A project was carried on whereby inferior trees were removed from a young loblolly pine stand and converted into fence posts with a creosote treatment. These posts cost 46½ cents each delivered to the point of use.

Forest plantations were established on 350 acres of worn farm land. Inspection at the end of the first growing season disclosed that more than 90% of the trees planted were living.

Formal 4-H club projects consisted of tree identification studies, reforestation practices, instruction in transplanting shrubs for home beautification, forestry talks, and the showing of forestry moving pictures.

Members of the Hebbville 4-H Club setting out forest trees under direction of the specialist.

A study of timber resources in Worcester County is under way. This project consists of making a 100% estimate of the timber connected with farms in the northwestern section of the county. A total of 30,000 acres is involved and the survey, when completed, will furnish each farmer in the area a detailed estimate of the number of board feet of timber in his woods and the rate at which it is growing. It is planned to form a cooperative timber marketing association and to sell a volume of timber each year equivalent to the annual growth.

CANNING CROPS

MUCH of the work with canning crops was aimed at improvement in quality, as well as efficiency in production. Quality in the pack begins with quality in the raw product, and, unfortunately, most of the varieties suited to this climate are not of the best quality. In recent years great

were continued. Practices that were demonstrated as effective in control of disease included use of disease-free seed, treatment of seed, seed bed sanitation, plant treatment, and crop rotation. Certification of sweet potato seed was continued and 6,000 bushels, grown by 7 growers on 27 acres were eligible for certification.

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strides have been made by plant breeders in producing high-quality varieties and strains which are better suited to this area, and other work is in progress to aid canners in obtaining products from growers in best condition for canning.

Placement of Fertilizers—For a number of years, attention has been given to soil maintenance and fertilization in the work with canning crops and in 1938 a special effort was made to assist growers in making most efficient use of their fertilizers. Since additional information was needed, a number of demonstrations were carried out in cooperation with the experiment station. These included placement of fertilizers in bands and in other ways in the growing of peas, tomatoes and snap beans. Twelve different fertilizer treatments were tried with lima beans to compare different analyses and amounts.

Organic matter is deficient in most soils in the regions where canning crops are grown extensively and efforts were continued with a view to helping growers make up that deficiency in the most economic and practical manner.

Variety Demonstrations—The importance of work in this line has been greatly augmented in recent years by the development of new varieties of high quality that are adapted to this area. Variety demonstrations included peas, tomatoes and lima beans. Twelve varieties of early sweet peas and five strains of Alaska were planted. Field demonstrations were conducted in 10 of the principal tomato producing counties, comparing Marglobe, Rutgers, White's No. 4, and a special selection of Marglobe. Efforts to determine the value of new varieties of lima beans were somewhat curtailed by inability to secure seed of some that had shown promise in former years. More extensive work with this crop is planned, as the need for improvement in the quality of canned lima beans warrants considerable effort.

Seed Improvement—In past years, work in this line has consisted of both actual seed selection and saving and also trial-ground plots of canners' seed stocks. The latter phase was omitted this year, but certain stocks from different seedsmen were included in other demonstrations. Many of the sweet corn stocks were included in the work of the agronomy

section, and a number of seedsmen's strains of peas were placed in variety plantings.

Tomato seed selection was conducted with Rutgers, two strains of Marglobe, and five new crosses and selections developed at the Maryland Experiment Station. Seed saved from some of these will be used by the Tri-State Packers' Association in its commercial seed-saving operations.

For a number of years the canning crops specialists have cooperated with the Tri-State Packers' Association in commercial seed saving in an effort to have a reliable source of true-to-type seed available within the State. It is not yet known the exact quantity of such seed saved, but yields were quite disappointing, due to heavy rains in July.

Pea Grading—In response to requests from canners for a reliable method for determining the maturity of raw peas, efforts were started in 1935 to devise a usable method for that purpose. As a result of this work to date, two methods have been developed that appear to give about equal accuracy. It is believed that a canner can use either of these methods with fairness to his growers and with greater accuracy than by use of any practical method yet suggested. One canner bought his entire crop on the basis of tenderometer determinations this year, and three other canners used the machine either for preliminary studies under their conditions with a view to buying on grades next year, or for docking their growers for delivery of sub-standard peas.

Diseases and Insect Control—Demonstrations were conducted this year in control of pea aphids and potato beetles on tomatoes, and in seed treatment of peas. The former were designed particularly to show the results obtained by dusting with different amounts of rotenone, and the latter to show the effect of treating pea seed with Ceresan, especially upon the nodulation.

Other insect pests and plant diseases required attention, as growers were confronted with specific problems and sought aid.

Ten-Ton Tomato Club—This was the eleventh consecutive year that this contest has been conducted. The enrollment of 191 growers was exactly the same as in 1937.

Due to heavy rains late in July, tomato yields in Maryland were the lowest in recent years. However, 10 growers succeeded in making the ten or more tons to the acre that is required for membership in the Club. Robert G. Howard, of Baltimore County, had the highest yield with 13.06 tons to the acre. Randall Lewis, of Dorchester County was second with 12.956 tons to the acre.

TOBACCO

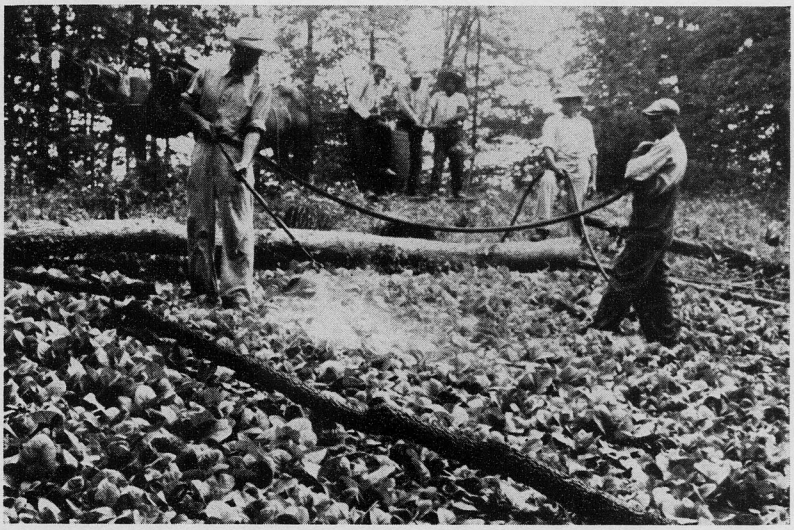
THE area of the tobacco section in Maryland is small compared with areas of other tobacco producing states, and compared with the acreage of some other crops in this State. Even the acreage devoted to tobacco within the area is small compared with the total acreage. Nevertheless, the tobacco crop occupies a position of exceptional importance because of the fact that it is the source of so large a percentage of the income of the five Southern Maryland counties, which constitute the tobacco-growing section.

Furthermore, tobacco is not a crop whose production is likely to be expanded to other sections of Maryland. The differences in soils and climate may confine its production to the territory where now grown and extension activities are conducted almost exclusively in that territory.

Production Practices—Not only the yield, but also the quality and the price received per unit depend in large degree upon the practices followed in production of the tobacco crop. Consequently, a program designed to secure general adoption by growers of the improved practices has been carried out for a number of years and was continued in 1938. Efforts were made to further reduce the number of growers who use strains or hybrids of tobacco of unknown origin. Records of demonstrations conducted with 81 growers show that leading varieties grown by them returned $20.00 an acre more than the unknown strains.

The majority of growers now use seed that has not been cleaned or tested for germination and experience difficulty in securing the desired stand in their plant beds. By cooperation with the State Seed Laboratory, 499 lots of seed were tested and the service is offered to all growers who will take advantage of it.

A demonstration started in the fall of 1937 and designed to determine the practicability of using calcium cyanamid to prevent the growth of grass and weeds in tobacco seed beds proved successful in some instances and on some types of soils. The results were such as to indicate the desirability of further trials and certain modifications in method to meet different conditions.



Spraying tobacco seed beds with copper oil spray proved effective in controlling blue mold, one of the most serious diseases of the crop in recent years.

Disease Control—Wildfire and blue mold, particularly the latter disease, have taken a heavy toll of plants each year for the last seven years. Growers have lost millions of plants by blue mold in the last three years, and some have not been able to plant a normal crop. A very satisfactory spray for prevention of these diseases has been developed and much work was done in 1938 to set in motion the machinery and convey to farmers generally the information necessary to spray their tobacco beds successfully. There seems to be no way to accurately measure the economic value of this effort, but it is known that many farmers were able to plant a normal and full crop of tobacco for the first time in several years.

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House-Burn—In about three out of five years growers experience difficulty and suffer loss from house-burn. Since it cannot be known in advance what the weather conditions will be during the curing period, it is difficult to know how to prepare to combat the trouble.

Arrangements were made to continue demonstrations in the use of artificial heat, but fortunately weather conditions in 1938 were such that such measures were not necessary and the farmers have a fairly well cured crop.

Marketing—The price received by growers for the 1937 crop was somewhat disappointing and considerable agitation developed to determine whether or not a loose-leaf or auction floor system of selling Maryland tobacco would prove more desirable than the hogshead method that has been in vogue for many years. The Extension Specialist spent some time on the flue-cured loose-leaf floors in the South studying the methods and their operation in that section, with a view to providing information and advice desired by Maryland growers.

Conservation Program—Maryland tobacco was not included in a specific program under the AAA and growers of the crop participated only through the soil-conserving practices. Improvement and maintenance of soil fertility is an important factor in the tobacco section and every encouragement was given growers to take full advantage of the opportunities offered by the program.

Exhibit—Perhaps for the first time in the history of the State, a tobacco exhibit was staged in Baltimore in connection with the annual winter Farm Products Show. All five of the tobacco producing counties were represented and 28 exhibits were displayed—22 by adults and 6 by juniors. The exhibit undoubtedly has considerable educational value, both to the growers and to the people of the city, some of whom did not know that tobacco was produced in their State.

AGRICULTURAL ENGINEERING

THE value of the CCC drainage program, carried on in cooperation with the Extension Service, to the farmers in many sections of the Eastern Shore has increased substantially and is continuing to increase.

Rural electrification extension work potentially will affect 50 percent of the farm families in Maryland.

Farm Drainage—Inadequate drainage is one of the major problems confronting farmers in a considerable portion of the Eastern Shore. The outstanding development in this field during 1938 was the work of three CCC Drainage Camps located in that area.

Although a Federal project, this work is carried on in cooperation with the Extension Service through the Extension specialist in Agricultural Engineering, who serves as District Engineer with general supervision over the work program of the camps.

From January 1, 1938, to October 1, 1938, these camps cleared 2,033,174 square yards, or 420 acres of ditch banks and channels and excavated 515,809 cubic yards of material from channels. At a conservative estimate, this work would have cost $194,650.00, if done at the expense of the farmers benefitted.

Rural Electrification—Maryland has moved from 21st place to 16th place in regard to the percentage of farms using central station electricity during the three years that rural electrification extension work has been carried on, according to statistics of the Edison Electric Institute. This State now has 16,600 farms with electric service. A project organized under the Rural Electrification Administration in Caroline and Queen Anne's Counties will serve approximately 300 rural families.

A general educational program was carried out that was well-balanced for men and women. Use of electricity, lighting, safety, care and repair, and obtaining of service were among the practical phases presented at 47 meetings with attendance of 1,408. Twenty-seven of these meetings were with women's clubs and 21 meetings with men's groups.

Rural electrification is becoming more and more a problem for the combined efforts of women, men, and the children, and, therefore, is more and more an extension Service problem. Safety, better lighting, efficient use, lower cost of doing farm jobs, and reduction of the drudgery type of labor by use of electricity naturally result in better living conditions, more efficient, safe and sanitary homes and farm buildings, and more time for other activities.

Farm Structures—The program in this line was based upon promoting distribution and use of "Plans of Farm Buildings for Northeastern States," U. S. D. A. Miscellaneous Publication 278, and of the occompanying Maryland supplement. These publications together constitute a catalog of farm building designs. Blue print plans for every design shown are kept on hand in the office of the project specialist.

Eighty-six sets of these publications were distributed to county agents, extension specialists and teachers of vocational agriculture. Two hundred and twenty-five sets were sold to private individuals, principally farmers and builders.

Despite the fact that a policy of charging for blue prints was adopted the first of the year, 336 blue prints were distributed in response to specific requests during 1938.

Home Utility Service—Assistance was given in eight counties in connection with water supply and sewage disposal, wiring layouts for homes, home heating, kitchen arrangement and water supply, remodeling homes, and safety equipment.

ECONOMICS AND FARM MANAGEMENT

IT IS difficult to summarize the activities which belong more or less directly in the field of economics and farm management. They are so closely correlated and interwoven with the many projects carried on by the service that they cannot be segregated. As a matter of fact, the economic problems of agriculture have assumed so great importance and demanded so much attention in recent years that they have become an important part of nearly all extension projects.

The programs of the AAA and other national programs have helped to bring the economic aspects of agriculture more prominently into the programs of both the specialists and the agents in the counties. The need and desire for aid in adjusting their individual farming operations and practices to conform with planned production has greatly increased the opportunity for service by extension workers in all fields.

To meet the growing need, the specialists in economics found it necessary to devote greater attention than ever before to the assembling and disseminating of basic economic information underlying conservation, marketing and other programs. Especially has there been a need for such infor-

mation in connection with the efforts to develop sound land use programs throughout the State.

Farm Records—Farmers are recognizing more and more that that they cannot deal intelligently with the business phases of their operations without reasonably adequate records. Likewise, it has become increasingly important that facts and data as to actual conditions be available in order that extension specialists and agents may advise as to sound plans and adjustments.

It has been the aim to assist in the keeping of farm records, but to do so on a practical and helpful basis. Particular attention was given to encouraging farmers in the keeping of records sufficiently adequate to be of real value. To that end, well-planned record books were provided to those who would agree to keep such records, both adults and youth, and as much personal assistance was given to those entering the project as the limited personnel would permit. In addition, as many of the complete records as possible were analyzed and the results supplied and explained to the cooperators. As such results accumulate for a number of years, they become increasingly valuable as basic information in connection with work on economic subjects.

Due to a change in specialists during the year, and the resulting lack of supervision, and possibly somewhat to discouraging prices, the percentage of those starting who completed their records was not as high as desired. However, development of the inclination to exercise the painstaking effort essential to keeping records is a gradual process and progress is being made. Comments of those who have completed records, especially for a number of years, is almost universally favorably and their value is becoming apparent to them.

Agricultural Outlook—Based on the national agricultural outlook as determined by economists throughout the country at their annual conference, and also on data and information regarding the situation in Maryland and surrounding region, a statement as to the outlook was prepared and distributed to farmers in advance of the season for planning operations on their farms for the year. In this statement, it was the aim to give them in brief form the principal factors and trends that should be considered in connection with all the

main farm products in the State. It was in no sense a forecast, but contained information that would help in planning the year's program.

Farm Management—While most of the work in farm management was accomplished directly through the agents in the counties and the specialists in other projects, it was based upon a large volume of economic information and data that were assembled from many sources and placed in usable form. Surveys are in progress constantly in cooperation with members of the investigational staff, and effective use of material obtained in that way is a major activity of extension workers.

RURAL SOCIOLOGY

LEADERSHIP training of farm people by means of group discussion was an important part of the work in this project. Assistance was given the Farm Bureau in establishing 65 discussion groups throughout the State, each group consisting of approximately 12 families and meeting monthly. Material was supplied for use by these groups. Granges were given similar aid by conducting demonstration discussions in Pomona and subordinate units. The increasing demand for help of this character is evidence of the interest on the part of rural people and the value they derive from it.

During much of the year, the work in this field has been associated closely with the land use planning program that was undertaken as a major activity of the Extension Service. The Extension Rural Sociologist has taken an active part in developing the plan for enlisting farm people generally in the planning program. Since intelligent planning for a community or county by the people themselves involves group consideration and discussion of the many factors and conditions that have a bearing on the program, the training and experience in group discussion has proved of great value. Only the ground work has been laid in this planning project and it will assume increasing importance during the coming year and years immediately following.

GENERAL ADULT EDUCATION

BROADENING the programs of adult education conducted by the Extension Service by including such lines as rural sociology, and a few of the so-called cultural subjects, has

met in a small degree the demand for greater opportunities by rural people, but the problem of serving those in urban districts has not been solved. The services of Professor Charles S. Richardson, head of the Department of Speech, and other members of the University faculty and staff were in demand for addresses and other forms of participation at a wide variety of general events throughout the State. It was not possible, however, to conduct systematic educational programs in subjects desired by numerous groups of adults who were anxious to continue their development and self-improvement.

A faculty committee on extension education made a thorough study of the situation and outlined policies for procedure which were approved. Definite progress cannot be made until resources permit the employment of suitable personnel to carry on the work. Attempts in former years to conduct extension classes in general subjects for the benefit of adults at points distant from the University, and with the cooperation of the regular faculty, have demonstrated that the policy is not satisfactory. It is hoped that facilities may be provided in the near future to make a substantial start toward meeting this very evident need for service to the people of the State.

Maryland Crop Estimates

THE same cooperative arrangement between the Division of Crop Estimates of the U. S. Department of Agriculture and the Extension Service that has been in effect for a number of years was continued through 1938. Trained statisticians are stationed at the University of Maryland and provide periodic estimates and reports on acreages, yields, conditions of growing crops, numbers of various types of livestock, and other important phases of agriculture. Mr. J. A. Ewing, who has so ably conducted the work during the last few years was promoted to a more responsible position in the Washington office. He was succeeded by Mr. C. E. Burkhead. Mr. Paul L. Warner continued at this office.

Information of the character provided by this service has become of constantly increasing value and importance in connection with the programs to which extension workers and farm people generally have devoted major attention in recent years. With the efforts that are being made to develop

sound land use programs the need for that kind of information is further magnified.

The cordial, cooperative and helpful attitude of all representatives of the Federal Service is greatly appreciated, as well as the capable manner with which they have conducted the work. While there is great need for more complete data on crops and agricultural commodities in Maryland than have been available thus far, a considerably expanded force is necessary before the service can be extended.

State Horticultural Department

A CLOSE coordination between the Extension Service and the duties and responsibilities of those operating under the State Horticultural Department is maintained by virtue of the fact that they both function under direction of the Director of the Extension Service. The State Entomologist and State Plant Pathologist are responsible for active prosecution of the work. Reports are made by them annually and are included in the biennial report of the University.

The State Horticultural Department is concerned with control and inspection features, but the fact that to a large extent the same personnel operates in both capacities makes it possible to incorporate much educational work with control duties. Both from the standpoint of economy and efficiency the arrangement has proved exceptionally satisfactory through the many years that it has been in operation.

CONCLUSION

AGAIN it is difficult to point out in a report of this character the tremendous amount of work that has been conducted under the jurisidiction of the Extension Service in cooperation with the Federal Department of Agriculture. Perhaps no year has produced greater results than this year in the effectiveness of both men's and women's work, as well as the development of Club Work. The organization of the older youth into a State Council, supplemented by County organizations, will, we feel, be a great factor toward interesting these young people in rural affairs and lead them toward attacking some of the economic problems of this era.

I cannot conclude this report without referring to the difficult problem that faces many of our rural people in the mar-

keting of their crops and securing adequate income to maintain proper standards of living.

In addition to various activities that have been directly associated with Extension, we have close relationship with the Farm Security Administration in extending loans to the underprivileged farmers. We hope to continue to cooperate with this branch of the Federal Service as closely as possible. When these people are rehabilitated they become immediately constituents of our County Agents and rely upon our educational forces for continued help.

The County Committees, under the Agricultural Adjustment and Domestic Allotment Act, have integrated their work with the farm organization committees in the respective Counties under the leadership of the County Agents and the whole program of farm assistance has gone forward, we believe, with satisfaction to our people.

The group discussion work, under the leadership of County Committees and our specialists, has aided in more intelligent consideration of community problems.

The Service continues to be indebted to the specialists of the Extension Service of the U. S. Department of Agriculture and action program administrators for their sympathy and cooperation in the conduct of the whole work in Maryland.

We are all indebted to President Byrd for his sympathetic cooperation and support in all of our agricultural activities. The University has made great strides and is more and more being appreciated by the people of the State.

I wish again to express my appreciation to the President and all of the leaders and workers for carrying forward a united program of service to the farmers and homemakers of Maryland.

SUMMARY STATEMENT OF EXPENDITURES, BY PROJECTS, SHOWING CLASSIFICATION OF EXPENDITURES FROM ALL FUNDS USED FOR EXTENSION WORK, FISCAL YEAR ENDED JUNE 30, 1938

Projects	Total	Personal Services	Labor	Supplies and Materials	Communication Services	Travel Expenses	Transportation of Things	Printing, Binding and Cuts of Publications	Furnishing of Heat, Light, Power, Water & Elec. (Services)	Equipment	Miscellaneous
Administration	$ 33,524.90	$ 15,604.38	$ 307.72	$ 2,224.44	$1,322.92	$ 704.48	$122.73	$	$831.03	$ 596.29	$11,810.91
Publications	14,703.71	8,491.41	120.35	1,496.25	827.21	59.32	29.41	3,592.96	.....	74.70	12.10
County Agent Work	125,376.27	101,618.03	.....	3,087.36	148.43	20,140.56	6.06	.....	17.50	63.68	294.65
Home Demonstration Work	101,229.01	75,404.99	.....	3,742.94	64.14	20,157.01	3.59	.....	17.50	124.36	1,714.48
Club Work	16,733.73	10,334.16	.....	228.60	52.08	5,452.01	14.15	.....	.....	62.83	589.90
Agronomy	4,057.78	3,124.41	321.35	18.45	11.15	562.15	.....	.....	.....	20.27	.....
Animal Industry	8,547.88	6,492.90	5.00	81.58	5.99	1,959.29	.98	.....	.....	.....	2.14
Horticulture	10,463.13	8,958.17	.....	75.58	19.63	1,309.63	.....	.....	.....	100.12	.....
Dairying	12,572.02	8,932.16	.....	19.53	83.04	3,519.36	.....	.....	.....	17.93	.....
Agricultural Marketing	18,061.58	12,503.25	.....	202.54	128.35	5,097.43	.....	.....	10.00	101.88	18.13
Imp. Poultry Husbandry	11,328.49	9,140.83	17.77	237.85	57.79	1,777.38	7.82	.....	.....	10.50	78.55
Entomological Extension	45,875.78	12,628.83	14,765.60	6,539.46	1,631.15	5,046.81	379.43	.....	30.00	2,758.63	2,095.87
Pathology	6,498.75	4,570.50	4.20	156.75	12.60	1,668.95	10.92	.....	.....	67.33	7.50
Canning Crops	6,804.37	5,132.34	179.00	29.67	57.20	1,320.75	.....	.....	.....	17.93	67.48
Farm Forestry	1,962.17	857.41	.....	1.08	.....	1,040.96	1.92	.....	.....	60.80	.....
Poultry Marketing	3,322.89	2,891.67	.....	.....	27.84	403.38	.....	.....	.....	.....	.....
Rural Engineering	6,198.34	4,812.50	.....	102.12	82.20	1,191.35	5.17	.....	.....	5.00	.....
Home Management	3,747.32	2,925.00	.....	19.97	18.14	738.56	.....	.....	.....	45.65	.....
Economics and Farm Management	4,422.59	3,090.84	.....	136.57	28.13	1,166.53	.52	.....	.....	.....	.....
Apiculture	2,323.16	1,350.00	.....	11.55	.....	961.51	.....	.....	.....	.....	.....
General Educational Ext.	11,337.22	606.00	.....	105.61	1.75	207.74	.41	.....	.....	.....	10,415.71
Rural Sociology	1,390.47	933.33	.....	15.80	.05	431.29	.....	.....	.....	.....	10.00
Tobacco	4,370.03	3,782.50	.....	8.46	24.96	492.37	.....	.....	.....	.....	61.74
Home Furnishing	1,630.94	1,290.00	.....	18.52	27.05	289.16	2.00	.....	.....	4.21	.....
Nutrition	3,559.89	3,220.00	.....	2.50	16.75	307.30	3.34	.....	.....	10.00	.....
Clothing	3,521.88	2,880.00	.....	11.00	16.42	595.16	.....	.....	.....	18.30	1.00
Soil Conservation	514.61	100.01	.....	11.20	.20	398.05	.....	.....	.....	5.15	.....
Total	$464,078.91	$311,675.62	$15,720.99	$18,585.38	$4,665.17	$76,998.59	$588.45	$3,592.96	$906.03	$4,165.56	$27,180.16

SUMMARY STATEMENT OF EXPENDITURES, BY PROJECTS, SHOWING SOURCES OF FUNDS USED FOR EXTENSION WORK, FISCAL YEAR ENDED JUNE 30, 1938

Nutrition	3,559.89	2,709.86		11.00	16.42	595.16				18.30	1.00
Clothing	3,521.88	2,880.00		11.00	16.42	595.16				5.15	
Soil Conservation	514.61	100.01		11.20	.20	398.05					
Total	$464,078.91	$311,675.62	$15,720.99	$18,585.38	$4,665.17	$76,998.59	$588.45	$3,592.96	$906.03	$4,165.56	$27,180.16

SUMMARY STATEMENT OF EXPENDITURES, BY PROJECTS, SHOWING SOURCES OF FUNDS USED FOR EXTENSION WORK. FISCAL YEAR ENDED JUNE 30, 1938

Projects	Total	Federal Funds			Offset Funds	Funds Not Used as Offset		
		Smith-Lever	Capper-Ketcham	Additional Cooperative		College and State	County	Other
Administration	$ 33,524.90	$ 10,766.58	$ 1,082.39	$	$ 7,211.74	$ 13,726.24	$	$ 737.95
Publications	14,703.71	7,376.40	1,144.92		3,803.10	2,376.89		2.40
County Agent Work	125,376.27	50,086.42	12,464.69	7,995.26	14,312.85	1,356.95	38,072.25	1,087.85
Home Demonstration Work	101,229.01	35,263.92	10,873.69	184.74	15,543.36	2,540.05	29,319.25	7,504.00
Club Work	16,733.73	9,624.76	12.48	375.00	2,087.64	556.89		4,076.96
Agronomy	4,057.78	1,329.00	6.49		1,661.12	1,052.77		8.40
Animal Industry	8,547.88	3,400.37	3.04		1,537.95	3,188.48		418.04
Horticulture	10,463.13	6,253.10	11.63		3,626.59	563.78		8.03
Dairying	12,572.02	3,701.19	31.18		1,207.09	5,147.35		2,485.21
Agricultural Marketing	18,061.58	2,235.92	109.69		2,417.39	7,888.63		5,409.95
Imp. Poultry Husbandry	11,328.49	5,723.17	27.64		3,432.17	2,103.29		42.22
Entomological Extension	45,875.78	445.18	3.29			45,287.14		140.17
Pathology	6,498.75	624.21	6.28		4.45	5,863.81		
Canning Crops	6,804.37	2,980.25	37.22		2,951.09	835.81		
Farm Forestry	1,962.17				1,617.48	144.06		200.63
Poultry Marketing	3,322.89	1,216.95	5.91			2,100.03		
Rural Engineering	6,198.34	3,302.29	22.84	545.00	974.41	1,276.98		76.82
Home Management	3,747.32	2,860.65	46.59		606.55	225.08		8.45
Economics and Farm Mgmt.	4,422.59	1,996.68	135.00	500.00	1,052.91	738.00		
Apiculture	2,323.16	352.78			200.00	1,770.38		
General Educational Ext.	11,337.22					11,337.22		
Rural Sociology	1,390.47	361.56				926.39		102.52
Tobacco	4,370.03	3,100.70	8.44		1,017.84	243.05		
Home Furnishing	1,630.94	1,113.16	29.91		364.38	123.49		
Nutrition	3,559.89	2,709.86	7.89		697.95	144.19		
Clothing	3,521.88	2,605.00	5.40		696.55	211.03		3.90
Soil Conservation	514.61	174.85			294.36	45.40		
Total	$464,078.91	$159,604.95	$26.076.61	$9.600.00	$67.318.97	$111,773.38	$67,391.50	$22,313.50